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#### Wheat—Important Facts in Regard to Cultivation.

Every farm crop requires in the soil certain essential ingredients for its perfect development. Of the cereals some may be grown for a much longer period upon the same soil without manure, without material diminution, than others. Experience, in every age and in every country, has shown that wheat is the most liable to decrease in product in a shorter space of time, when grown upon the same soil, than any other grain. This fact is conclusively proven in certain sections of the United States, comparatively new, where wheat once gave good crops but now cannot be grown at all. In some countries, and even in certain sections of our own land, the soil is, by nature, more abundantly supplied, and in more uniform proportions, with these essential elements for the growth of wheat than others. In these sections, of course, the soil will continue to yield good crops without material diminution for a longer time than those lands that are deficient in some one or more of these elements.

It should be borne in mind that, as in chemical combinations and affinities, if *any one ingredient is minus*, it is equivalent to a deficiency in all.

The celebrated English farmer, Tull, who began his farming operations previous to the year 1700, was the first who boldly and zealously contended for the adoption of improved machinery in all agricultural operations. It was he who first introduced the *Horse-hoe*, or cultivator, at this early period in the history of farming, yet it has been slow to find its way into this country, and it was not until within the last ten years that any considerable number of the American farmers learned its value. Nor are the practical lessons taught us by Tull, in the use of this instrument the only important facts the farmer may learn from its use, but he also taught that however important it is to keep the surface of the earth light and mellow around the growing crops, it is equally essential that the soil should at first be thoroughly broken up and pulverized.

Tull found, that, on a thoroughly prepared soil, wheat, when drilled or dibbled in, and cultivated during its early period of growth, would continue to yield for eight or ten years undiminished crops in succession upon the same land. The benefit of this system of thorough cultivation led him at first to conclude that with a mellow soil, made so by repeated stirring, manure was unnecessary; but finally his error, in this respect, became apparent. He at length discovered that certain ingredients in the soil were liable to diminution and exhaustion, and that with good husbandry large crops could be grown, only so long as the requisite properties in the soil were available to the crops.

We have recently seen prominent notices of

an experiment made by the Rev. Mr. Smith, of Lois Weedon, Northamptonshire, England, in "cultivation without manure." Mr. Smith has, for a series of years, followed similar experiments to those of Tull, though by a somewhat different process of cultivation. Mr. Smith's experiments are detailed as follows:

"He has for twelve consecutive seasons cultivated wheat on the same ground, without manure, the average product being thirty-five bushels per acre. It should be said also that the yield has not diminished, but has latterly been as good as when the experiment was commenced. The method is to till the land by the spade, to the depth of the sub-soil; plant three rows of wheat with a space of one foot between each, and then leave a breadth of three feet, which is used as a fallow, and kept open by the spade. When the crop is taken off, the fallow spaces are seeded, and the ground previously occupied left vacant; thus, in reality, producing wheat on half the ground every other year."

The above details of this interesting experiment we have seen published in various agricultural papers in the United States "without note or comment," for while it confirms one essential fact which above all others we have labored to enforce upon the attention of the American farmer, viz: The importance of thorough disintegration and subdivision of the particles of the soil, yet it is liable to leave a false impression in regard to the necessity of manuring, in some form, in order to successful farming.

In soils like those upon which the experiments of Tull and Smith were made, by thorough subdivision and aeration all of the essential elements for the full development of the crop were rendered available, by enabling the roots to penetrate and ramify to their full depth in every direction; and while the *wheat food* in the soil lasted, full crops might be grown.

Another important fact in regard to wheat culture has been proved by the experiments of Mr. Lawes, of Rothamstead. By his experiments it appears, that, besides the organic and inorganic ingredients contained in the soil, essential to the perfect growth of the wheat plant, it also requires a large amount of ammonia. This is derived in considerable quantity, by growing plants from Nature's great storehouse in the rain and snow. Some soils, from their peculiar constituents and character, absorb ammonia in a greater degree than other soils of different character. And those soils best adapted to any particular crop will absorb and retain for the use of that crop a much larger amount of ammonia when reduced to a state of the most perfect mechanical subdivision and pulverization, compared with those but imperfectly broken, and

left in the condition as most farmers have been in the habit of doing, hardly exceeding three or four inches deep, and never rolled, and scarcely harrowed.

What is proved by these experiments in regard to wheat is of still greater importance to the corn and other summer crops. This is admitted by the practice of our farmers by the cultivation they give to these crops, while they withhold culture from the growing wheat. The culture of wheat in England by hand-hoeing is common. But the price of land and labor in this country, as compared with the price in England, will not warrant this kind of cultivation, yet it will abundantly pay to put the land in better condition before sowing the crop; and we believe that an implement may be made by which wheat can be successfully cultivated by horse power, when seeded in a proper manner. A few experiments have been made in seeding wheat in drills and cultivating the crop in spring. These experiments have been highly satisfactory, yielding crops at the rate of fifty or sixty bushels per acre; yet it can never supersede the necessity of adding manure to the soil, to restore to it those materials removed from it with each succeeding crop.

On our river bottoms, subject to almost annual overflow, the case is different. With each overflow these waters deposit as much of the food of crops as is removed from the soil annually by the crops. But in the culture of corn, and other crops upon these lands the product may be increased two or three fold by the system illustrated in the experiments of Tull and Mr. Smith.

**BLANCHING CELERY WITH SAWDUST.**—Celery does not grow equally well on all soils, neither will it keep as well during winter in some kinds of soils as it will in others. A correspondent of the *London Gardener's Chronicle* failing to keep his celery sound in a damp soil, adopted the following method. He says:

"Having had some trouble in the winter of 1857 in keeping late celery from rotting in a new kitchen garden, where the soil was very retentive and damp, and the plants earthed up in the usual manner, I have since used sawdust for the purpose, and find that it answers perfectly. Last winter all the late celery was earthed up with sawdust, and it kept quite sound till April, and no slugs or insects attacked it under ground; the heads being very solid, clear, and crisp, and well flavored. I had some doubts that the sawdust from resinous trees might give the celery a disagreeable flavor, but on trial I found that not to be the case, and the sawdust is now taken indiscriminately from the saw-pits, where dif-

ferent kinds of trees are sawn up. Before the late severe frost occurred in October, I had just finished the earthing up of all the late celery with sawdust, and I find it now wonderfully fresh, the frost not having penetrated far into the surface of the hearts. The practice of using sawdust may be new to some, yet I often hear of the difficulty of keeping late celery from rotting in winter, and the more extended use of sawdust may be of advantage to other gardeners who, like myself, have stiff and damp soils to manage."

### Destruction of Forest Trees in Wood-land Pastures.

The peculiar adaptation of the woodlands of the central portions of Kentucky to blue grass, and the great value of this grass as pasturage for stock, have induced the owners of these lands to clear out the undergrowth and inferior timber, and to seed down almost every acre of their lands to blue grass. The consequence is, that the excellent timber of this entire region now shows signs of speedy decay. Nature creates nothing in vain, and when this beautiful country was furnished with its majestic trees and its undergrowth of vines and shrubs, and its boundless cane-brakes, well may it have been pronounced "very good." Between these lofty trees and the more diminutive growth beneath them, there exists a mutual dependence; neither can survive long without the other. The larger growth protects the smaller from the withering blasts of winter, and the scorching rays of the summer sun; while the undergrowth retains the fallen leaves and protects the roots from cold in winter, and prevents the escape of moisture during the dry, hot season of summer. Cut out the large trees, and the smaller growth will dwindle and die; remove the undergrowth and admit the direct rays of the sun to the soil, and the proper conditions for a strong luxuriant carpet of blue grass is secured; this takes possession of the soil and immediately dead branches and decaying trunks of the once healthy timber are everywhere to be met with. The winters of 1855 and '6 were particularly severe on the timber of these regions; many of the trees were killed outright by exposure to the strong cold winds and the intense frost, and thousands of others were more or less injured by the same causes. Fifty years more will hardly have passed before this once beautiful section of country will be denuded of its original growth of timber. Providence, however, seems to have provided in some degree for the deficiency. For fuel, coal is found in abundance at no very great distance; and with the general prevalence of the best

stone throughout almost every portion of this section of the State, as a substitute for timber, in the construction of fences, rail timber is no longer rendered indispensable; but at no distant day the want of a supply of timber for mechanical purposes will be severely felt.

These physical changes upon the surface of the earth, in substituting fields for forests, have probably been more rapid in this country than in any other, owing to the great increase of population. The effect of these changes are strikingly apparent in their influence upon the weather, as it regards the sudden and severe changes, as well as upon the quantity of rain that falls upon the earth; but particularly the change of our seasons into comparative wet and dry.

During the rapid settlement of our country the prevailing efforts have been to subdue the forest and to reduce as much of the land to a condition suitable for tillage as possible; and this spirit still prevails even where now there is a growing scarcity of timber. The result of this will be that in a few years the problem will present itself—How can we most speedily restore some of the wasted timber by artificial cultivation? and essays and premiums will be offered for the best methods for securing this object.

There are thousands of acres of land bordering on the rivers and streams, or the hills and bluffs, that are of but little value but for the growth of timber, and it would be well to bear the matter in mind and protect this, and encourage its growth against the time of need—at no very distant day.

There is but little of our country that has been settled longer than one hundred years, and with but a comparatively sparse population, how much of the native forests have yielded to the woodman's ax? What, then, will be the wants of the immense population that will probably occupy the country at the end of another hundred years?

**TO PROTECT A SHINGLE ROOF FROM FIRE.**—The editor of the *Albany Knickerbocker* says, that a wash composed of lime, salt and finesand or wood ashes, put on the ordinary way of whitewashing, renders the roof fifty-fold more safe against taking fire from falling cinders, or otherwise in case of fires in the vicinity. It pays the expense a hundred-fold in its preserving influence against the effect of the weather. The older and more weather-beaten the shingles, the more benefit derived: such shingles generally more or less warped, rough and cracked. The

application of the wash, by wetting the upper surface, restores them at once to their original or first form, thereby closing the space between the shingles, and the lime and sand by filling up the cracks and pores in the shingle itself prevents its warping for years if not forever.

### Selecting and Preparing Seed Wheat.

Farmers sustain great loss in not bestowing proper care and attention in the selection of the most productive varieties of wheat for seed, and in not cleaning it thoroughly from rye, cheat and other foul seed.

In the first place, the most productive kind should be chosen; that which is least liable to disease and the depredations of insects: and next in importance to selecting the best variety, that which is matured well, exhibiting a plump full grain and free from the seeds of noxious plants; not depending alone upon the selection of such as contains the least amount of such seeds, but care should be taken to thoroughly riddle and winnow the grain so that every foreign seed is removed. If proper precaution be used in thoroughly cleaning seed wheat of the seeds of chess, the false idea of *transmutation* would be forever exploded. A good wheat fan with suitable screens and riddles, when properly used, will generally remove all foul seed by running the wheat through it two or three times. In former numbers of the *Valley Farmer* we have published the method of removing chess from seed wheat, as practiced by John Johnston, of Geneva, New York. If we remember correctly Mr. J. simply runs the wheat *slowly* through the fan with the riddles removed turning at a brisk rate and thus blowing out all light seed, chess, &c. Where a proper fan is not at hand the work may be effectually accomplished by turning the seed into a large trough, or half hog-head tub of water and then skimming off all the light grains of wheat, chess and other light seed. When this method is employed it would be well to use a solution of blue vitriol in the water which at the same time would destroy all the sporules of smut and also prevent the tendency to rust. With the same vessel and with the same water a large quantity of seed wheat may be submitted to this process in a single day. The wheat need not remain long in the wash, but may be taken out and spread on the barn floor, and after remaining a short time, air-slacked lime, or plaster, may be mixed with it, thoroughly stirring it up with a shovel or grain scoop until it is well mixed, when it may be

sown. The increase of the crop and its freedom from other grain and seed will many times compensate for this trouble.

Recent experiments have definitely settled the question that earlier ripening of wheat may be secured by procuring the seed of early ripening kinds from the South. Wheat, unlike Indian corn, is a grain of Northern origin and will grow and mature in climates of much lower temperature than Indian corn will. The latter grain when grown at the South adapts itself to the climate and requires a longer period to mature than when forced to accomplish its work in a season of shorter duration.

In traveling over a wide extent of country just before harvest the past season, we noticed an unusual quantity of rye growing amid the wheat in various sections of the country. Whether the proportion of rye was increased the present season in consequence of the wheat being more tender and was partially killed out by the winter and thus admitting the rye to spread and increase, or whether it is to be attributed to other causes, we will not pretend to say. It is an easy matter to grow wheat free from rye; as the latter are so much taller than the wheat the heads are easily cut off with a knife or sickle before the grain matures, and this should always be done in the fields from which it is designed to select for seed.

### Osage Orange Hedge Destroyed by an Insect.

Our attention was called by a gentleman, not long since, to a favorite Osage Orange Hedge that is being destroyed by innumerable insects of the scale species much resembling those that sometimes prove fatal to the orange tree proper of the Tropics, and are not unlike the scale or bark-louse known to be so destructive sometimes to pear and apple trees, only the insect under consideration is at least five times as large as the kind that preys upon the fruit trees named. At the time we first examined the hedge, the insects were all confined to the parent scale, or had not in the present generation become fully developed so as to commence its work of destruction. These scales are about one-eighth of an inch in diameter and cover at least one-quarter the entire surface of the stems and larger branches of the hedge, which were dwarfed in size, and appeared as if fatally diseased. On a subsequent examination we discovered that the young had come forth, multiplied by thousands, and were firmly attached to the underside of the leaves, where they remain sucking the life of



the plant in its circulating fluids, the scales becoming dry, untenanted blotches on the stems and branches. While the insects are young it requires a magnifying power to detect their structural form. We shall examine them frequently through the season, and witness them in their more mature stages, and in a future Number give a full description of them. This class of insects is fully described by the late Dr. T. W. Harris and other entomologists. What is strikingly remarkable about them is, that the female sacrifices her body as a covering or shelter for her eggs and young offspring, and when they have gone forth the deserted tenement presents no appearance of ever having possessed organic life. The bushes first attacked are already dead, and from the immensely increased numbers the present season it cannot be long before the entire hedge is killed. After examining these insects we sent specimens of them, or the deserted scales, attached to the wood, to Mr. Jacob Stauffer, of Lancaster, Pennsylvania, requesting to be informed if they were the same that infest the orange trees of the South. Mr. S. very kindly replied to our inquiries, in regard to this insect, and also to other kinds forwarded at the same time. In his answer he says:

"The bark-lice or scale insect, found on the Osage Orange (*Maclura Aurantiaca*), I judge to be a different species from that found on the exotic orange, the two plants having no natural affinity; and although the matured insects of all that I have yet examined appear so nearly similar in shape and character, yet in the scales there is a marked difference, and there seems to be a peculiar species for each separate order of plants infested. They belong to the section *Monomera* among homopterous insects comprising those *Coccida*, or scale insects, the females of which change from an organized living creature into a dry, shield-like scale attached to the bark and covering a multitude of minute oval eggs, which hatch under the callous body of the parent and come forth in such numbers as nearly to defy extermination.

"The only remedy is to work the scales off with a stiff brush and soap and water, early in June or latter part of May, before the eggs are hatched."

After we had sent the specimens to Mr. Stauffer, we noticed in an exchange an account of the depredations of the same insect in Kent County, Maryland. It appears that here they have been exceedingly destructive to the hedge. The owner of the hedge referred to, found large portions of it dead, and in order to prevent the further extension of the insect cut out all the infected portions and supplied their places with rails. This course we deem equivalent to cut-

ting up the entire hedge, for we have no idea that where they have once appeared in such countless numbers that they can ever be exterminated so long as there remains a single plant to which the species belong. The remedy suggested by Mr. Stauffer might be applicable to a single tree, an ornamental favorite; but washing the thousands of stems of branches comprising miles of hedge is entirely impracticable. We have since compared the insects with those upon the tropical orange and find they differ materially in size; the insect scale on the Osage orange is two or three times as large as those on the orange proper, and a hundred times more numerous.

#### Lime on Wheat Land, Wheat Drills, &c.

J. M. Jr., of Jackson, Ark. wishes information in regard to the benefits of lime applied to wheat land? how much to the acre? how applied, &c.?

Lime, for certain soils, is of great benefit. In Pennsylvania, for instance, where the German farmers apply it generally to their lands in connection with the culture of clover, the wheat crop has more than doubled the yield per acre. But the same effects will not be produced on all soils, because some soils contain a sufficient amount of lime for the demands of all crops; but where the soil is deficient in lime it should be applied. To determine this question, experiments must be made, or the soil analyzed by some competent chemist. It is an easy matter, however, to try the experiment, first, with a small quantity per acre and increase the amount until the proper quantity is determined. It is applied at the rate of from fifty to two hundred bushels or more to the acre. The method of applying it is to take it from the kiln and haul it upon the field and drop it in small heaps at convenient distances apart; some cover the heaps slightly with soil, let it remain until it is air-slacked, and reduced to a fine powder, then it is spread, usually before breaking up the soil. Some farmers, who keep the lime on hand until it is thoroughly air-slacked spread it direct from the wagon in such quantities as experience proves best.

In regard to the question of wheat drills, we have before frequently fully answered. On all soils, like the prairies, for instance, that are free from the obstruction of stumps and stones, wheat seeded with the drill has many advantages over that which is sown broadcast. But the custom generally, of our Western farmers, of sowing wheat on corn stubble will prevent the more general use of the drill, on account of the

tendency of the corn roots to clog it. Where the character of the farming will admit of sowing wheat on summer fallow, larger crops of wheat may be expected, as it admits of a more thorough preparation of the land and the free, unobstructed use of the drill.

From one-eighth to one-quarter less seed will answer when put in with the drill than is required when sown broadcast; the crop withstands the effects of winter better, and from one-quarter to one-half more wheat is produced.

Drills are now so much improved that almost any of those advertised are good, like the various reapers and mowers, some farmers giving the preference to one and others to another. They are for sale at the seed and implement stores in Louisville and St. Louis, at from \$60 to \$70.

#### Sugar from the Chinese Sugar Cane.

All chemical examinations heretofore made, seem to lead to the unanimous conclusion that the Sorgho and Chinese Sugar Cane are rich in grape and deficient in cane sugar. The experiments of Mr. Lovering, sugar refiner, of Philadelphia, seemed to establish the fact that these eminent chemists were in error, for he made a large proportion of excellent sugar from this cane, yet his statements did not set forth so clearly how he did it. But the routine of his experiments seemed to suggest the idea that by some process that would produce the alternations of heat and cold, leaving the scum on the chilled surface of the evaporator to be removed as fast as it rose, was the secret of his success embraced. This led in Ohio to Cook's patent Evaporator, with which the manufacturers claim that all difficulty in the way of crystalizing the sugar is overcome. We have been shown a very handsome article of sugar made in this pan, and it is claimed by the manufacturers that the largest portion of the juice was thus granulated; and that all further difficulty, in the way of making as perfect an article of sugar as has been made of syrup, is removed. This we hope will prove to be the case. A new evaporator has recently been invented by Mr. Aaron Miller, of Laporte, Indiana, and a patent granted, which may be described as being two halves of a circular pan, six feet in diameter, and six inches deep, which are bolted together, but set a little distance apart, so as to leave an air space between the parallel sides of the pans. The two halves of the pan being filled with the Sorghum juice, that in one may be boiled up to the point of granulation and then turned off the fire to prevent burning, the rotation bringing the liquid in the other half over

the fire to be boiled in its turn. Samples of tolerable sugar have been exhibited that have been made in this new boiler at an expense, it is claimed, of not over two cents per pound. We earnestly hope this may prove true, yet we cannot divest our minds of some remaining doubt in the matter, for we cannot see how it is possible that the chemists who have given the subject their careful attention can be so mistaken in their opinion of the nature of the sugar of this new plant. The present season's operations will set the matter at rest, for we learn that large quantities of the seed has been planted and a large number of evaporating pans have been sold.

#### Wheat and Rye, Varieties, &c.

J. M. H., of Kansas City, wishes to know which is the best kind of wheat; and the most approved manner of sowing, &c. In an article already prepared for this number, some of the questions of our correspondent are answered; but as our remarks therein are of a general character, we will reply specially to some here requested. Some of the best crops of wheat that are grown are on fallow land, usually that which is in clover; the clover being turned under in July or August. Some sow after oats, but the most common practice in the West is to sow wheat on corn stubble. This method has its objections, and these objections were fully set forth in the May number of the *Valley Farmer* of the present year. But in any event a thorough preparation of the soil, by plowing, rolling and harrowing, better than our Western farmers usually practice, is essential for a good crop of wheat.

In the choice of varieties of wheat, the chief object is to select such, all other things being equal, as afford the greatest yield, and make the best flour. But as the wheat plant is subject to numerous insect depredations and other casualties, regard should also be had to the time of ripening. In New York and other wheat growing States, where the midge has become a formidable enemy to the crop, sowing the early maturing varieties is found the only means of escape. Sometimes the gain of six days in the maturity of the crop has saved it from total loss from this insect. Rust, too, is a disease that is often avoided through the same means. These considerations have led many farmers to sow the earlier varieties of wheat. In making a selection from these, such as are found to be best suited to each particular soil and locality should be chosen. The White Flint is a good

variety and succeeds well on most wheat soils; but the May wheat, in many sections, receives the preference. Mr. Anthony Kilgore, of Maysville, Ky. has been successful with this variety and has furnished many farmers with the seed. He usually sells at about the standard market price.

As a regular crop we do not consider rye as profitable as wheat. Rye should, however, be much more generally sown than it is for winter and early spring pasturage on corn stubble where the same land is intended to be put in a hoed crop the following spring, as that which remains and is turned under tends greatly to the improvement of the soil, which would otherwise lie bare; or when there is a scarcity of pasturage on the farm the rye may be eaten off by the stock in winter and in spring, until a short time before it joints, when the stock may be turned off, and a fair yield of rye may still be grown. When the rye is destined for bread, the white variety should be selected for seed—for stock the common kind is equally as nutritious.

[Written for the Valley Farmer.]

## LETTERS TO YOUNG FARMERS.

NUMBER FIVE.

### *Young men of the Farm:*

In the present paper we would speak of *Living for the Future*. We do not speak of the future world. To define the relations of this world to that, is the office of the minister. The special work of the farmer is in this world. But it is not a work for the present moment only: it relates largely to the future. No man sows and reaps in the same moment. In a certain sense sowing is a work of faith. He who does it commits his seed to the ground trusting to the soil, the sun, the rain, the seasons to give him a harvest in due time. In a certain sense he casts his bread upon the waters, hoping after many days to be rewarded for his work and his faith. As the preachers would say, sowing is of both faith and work. There is work in sowing; there is faith in the sower or he would not sow. We might make a parable of the sower to illustrate the young farmer's life. His beginning is the sowing. All his first work is putting in the seed for a future harvest. When he fences in his farm, when he plows his field, when he plants a tree, when he rears an animal, when he buys or makes an implement, when he builds his house, or does anything else to put into working order his farm, he does it with a view to the future. It is the sowing of the present for the harvest of the future. So the whole beginning of the young farmer's life relates to the future. It is a bud that he hopes will blossom by and by. He anticipates an outcome in after years. And this outcome is the spur of his actions. This wakes him early in the morning; this hurries him to the field; this quickens his mind with plans; this nerves his muscles with strength;

this fires his heart with hope; this cheers his labor and animates his life. He lives not for the present so much as for the future. His thoughts outrun his actions. While his hands arrange and work his farm, his hopes reach forward to competence, comfort, honor and happiness. His new farm just begun in fact, grows old, beautiful and fruitful in his mind. He sees orchards, meadows, wide fields of ripening grain; pastures rich in herds and cattle; granaries plenteous in wheat and corn; buildings comfortable, commodious and elegant; wife and children cheering him with smiles and words and works. The future is bright with all he means by the commencement of his farming career. Let him therefore learn from the very meaning of his beginning, how to work with a view to the best future success.

All his principal work must relate to the future. Some men refuse to plant a tree because trees do not grow in a single season to maturity. Selfish, short sighted conclusion! Better act like the old man of eighty who put out a young orchard with his own hands, and who, when upbraided by a neighbor for his folly because he would not live to enjoy its fruit, quietly said, "Well, somebody will." Would the young farmer have orchards? Let him put the young trees into the soil just where he would have his orchards and of just such kinds as he desires. Would he have shade trees about his house, elm, maple, chestnut, or catalpa? Let him plant the little twigs where he would have the trees. Would he enjoy shaded walks along his roads and lanes? Let him plant there the little seedlings that in the future will spread umbrageous branches above his head. He must not hesitate to plant for a long crop. Would he have his fields fenced with living, enduring hedges; beautiful fringes of verdure around his crops? He must not hesitate to plant the hedge-rows he desires. Would he have his fields safely guarded through years from intruding stock? He must remember to make his fences of such material and in such a way that they will stand like guarding sentinels through many seasons. Temporary fences are unsafe and in the end expensive and troublesome: so with nearly all temporary works. A fence put up to stay; a house or barn built to stand; a ditch dug and covered to last; an implement made for service; a job done upon honor, is always cheapest and best in the long run. Let fields be enriched for many harvests instead of one; let roofs be put on for a half a century, instead of a few years; let foundations be laid below frost and rain for solid endurance; let all the work of the farmer be done with a view to permanence and long usefulness, and he will be the gainer in the end. One nail saved now is often a dozen lost in the end. Work slighted in the beginning proves itself expensive at last. A thorough beginning generally turns out a successful ending. Thoroughness is the secret of a great success. Thorough study makes a scholar; thorough skill a physician; thorough practice a mechanic; and thorough work a farmer. He who hurries through everything generally so slight his work as to do nothing well. The

young farmer's motto, therefore, should be, *To do everything with the view to the largest and greatest good.* He should work for the future. His plans should extend far ahead, and all his wisdom and skill be extended to mature them through the course of his life, so he shall leave a farm that shall be a monument to his ability and success.

### THE ROLLER.

The use of the roller by our farmers is too much neglected. Numerous experiments in England as well as some in this country have proved that crops, and particularly wheat, are increased in proportion to the degree of subdivision and fineness to which the soil is reduced in the process of preparation. Experiments made by Thaer and others of more modern date, led to the opinion that land would produce wheat perpetually without exhaustion provided the soil be reduced to the proper degree of fineness by subdivision and cultivation. It is not expected that our farmers, at the present price of labor in our country can bestow the same time to the preparation of the soil that is given it in England; yet with proper implements a much better preparation may be given, with comparatively little increase of labor. In land the least inclined to be cloddy, the roller should never be dispensed with. It often occurs at the period of preparing for wheat that the weather is dry and the earth breaks up dry and cloddy, and these clods can only be thoroughly reduced and broken down by a clod crusher or roller, and where small grain is to be sown it is not only important that this should be done, but more especially so when clover or grass seed are sown with the crop for the purpose of mowing. Awkward work is made with the mower, and even the reaper, on fields where clods abound of the size of a man's head. The increase in the crops in the United States, within the last ten years in consequence of the improvements in the implements used in preparing the soil can hardly fall short of twenty-five or fifty per cent., and yet there are many farmers among us who are not willing to incur the expense of many of these improved implements, and among them none are more important than the roller. Not only is the use of this implement important in the preparation of land for small grain, but equally so for corn and other hoed crops. The yield is not only increased, but the labor of the subsequent cultivation of the crop is reduced more than all that expended in the use of the roller.

Rollers are now made in various ways: the cheapest and most simple is by using a large log

of some light timber, which can be put in shape and hung by almost any farmer. A better one is made of heavy oak staves and secured to an iron skeleton by bolts and screws, and made to revolve on an iron axle or shaft. Another is simply a clod crusher and is after the fashion introduced by Croskill, of England, which consists of a series of corrugated or scolloped rings or sections, say thirty inches in diameter and four inches thick, secured on an axle or shaft and each to revolve free.

This is one of the most efficient implements for the purpose, and leaves the ground in most excellent condition for wheat to go through the winter.

### Spring and Fall Sown Barley—Seeding Clover and Timothy.

J. F. L. of Clinton, Mo., makes sundry inquiries in regard to spring and fall barley; time and manner of sowing; yield per acre, &c. grass seed, &c.

In the South and West, barley is generally sown in the fall about the usual time that wheat is sown. Some farmers have made the experiment of sowing barley in the spring, but generally the fall sown has yielded the most satisfactory returns. When sown in the fall, the plants tiller or stool out better than when sown in spring, because the spring crop is forced on to maturity by the rapid approach of warm weather before it has time to spread. In New York and other Eastern States, barley is most generally sown in the spring, and in that climate it is found to succeed the best. The ground requires the most thorough preparation that would be given for a crop of wheat. When sown in the spring it should be done as early in the season as it would be considered safe to sow oats. Eastern farmers sow from two to three bushels of seed to the acre. In the West, when sown in the fall a less quantity of seed is generally put upon an acre. It should not however be less than two bushels. The yield is from twenty to sixty bushels per acre: more than of wheat, but generally less than oats. Good warm, mellow land, well prepared, is necessary to insure a good yield. Clover seed may be sown on barley in the spring, as it is on wheat. When the barley is sown in the spring the clover seed may be sown immediately after the barley, as with oats. Timothy seed should always be sown in the fall—in September if the ground is sufficiently wet to be put in good order. Timothy should never be sown with a grain crop, but the ground should be reduced to the finest possible condition and



the seed sown alone—unless it is desirable to mix some other grass seeds with it.

[Written for the Valley Farmer.]

### THE FARMER ON HIS FEET.

NUMBER FOUR.

*The Conservatism of the Rural Life:* If the farmer has any one thing upon which to congratulate himself more than any other, that thing is—the conservative influence of his surroundings. Nature is (so to speak) his society. The harmony of nature is an influence all the time molding an even, quiet state of feeling in him. That in which he is most interested, teaches him patience by the regularity of its transition from the germ to maturity. There is a process in the plant that demonstrates to him a valuable moral—*maille a maille se fait le haubergeon*: "Link by link is formed the coat of mail." There is no cheat in Nature. Nature and Truth are one—they are never obsolete—never neutral. They are powers and activities. They become, year by year, realizations to the farmer. A condition in which the rural people are *not* merged, can be truthfully shown:

"We are of a sanguine temperament. We first want to believe a thing true. We next find something like evidence to show it to be true. We seize hold of that evidence and allow our imaginations to magnify it a hundred fold. We then easily assume the thing to be true; and then we rush out to convince the world that it is so. The world is like ourselves. They want to believe it is true, and easily credit the evidence we adduce in favor of it. At any rate, if it is not true to-day, it will certainly be true to-morrow; the prospects are splendid; "the man is a fool or an old foggy who doesn't see that; so here's for going ahead, and the first innings will be the first winnings." Now, when such a delusion gets under weigh, it is sure to be puffed into a fiercer blaze by unprincipled scamps who vent the most atrocious lies for no purpose on earth but to increase the *furor*. So that, under the combined effects of imposture and self-delusion, our fellow-countrymen are often precipitated into excitements and plunged into adventures which astonish themselves after the excitement is over and they see how they have been fooled, both by themselves and others.

"There is no country on earth, where false and delusive statements and representations on all subjects are circulated so broadcast as in the United States. There is no people on earth more humbugged and gulled than is ours by these statements, which are sometimes impostures, but more often spring out of that propensity so common to our countrymen of jumping at conclusions."

This is the Woolly-Horse electricity of dense population. Society here is a convoluted telegraph. A whisper is enough to create commotion. Say *Elephant!* and you will flush a bevy of quails. From this condition the farmer enjoys a happy freedom. There is *no per saltum* in his surroundings. "Make haste slowly," is written all around him. It is the tortoise of the fable—and wins at last. There is a pain-

ful tension in a city life, from which the farmer has a conscious riddance—an incubus of fashion, he need not feel.

There is no imaginary current here. I should have lived to little profit, if no social facts had not been learned by this time. Having seen a good deal of society, I profess to have profited something by it. The echo of the anvil has not satisfied me—I have felt the need of the smith's experience. The notes of the harp were sweet, but Nature has taught her lesson in the song that was sung. The whistle of the farmer boy has been philosophy, as well as the schoolman's lecture. Hence I write as I write.

The press of the day might convince a recluse that the whole moral atmosphere was in a whirlwind. The citizen might think so too, from frequent demonstrations. But let them visit the rural people, and quite another aspect would be presented to them: a calm in the wake of the storm! Not that the farmer is ignorant of passing events; not that he feels no interest in them; not that he is derelict in patriotic duty; not that he is an unemotional man. His even tenor of mind is owing to quite another cause; second, sober thought. He believes what he sees; what he knows; what he hears he holds in abeyance. This is his habitual way of getting at the truth—a species of conservatism ministering both to his interest and enjoyment.

And the agencies bearing on the farmer's interest, have a conservative influence on his sensibilities. Sunshine, atmosphere, rain are working for him. These come to his aid without money and without price; come without license, without insurance policy. He has no misgivings about these: yet how they work for him. The April sun calls the dead Lazarus of the winter up, and soon the noble maize and moving wheat are things of life and promise: and the refreshing showers come to nurture and the atmosphere breathes its healthful gases, while industry stirs the soil. Thus success greets the farmer, at ease in his possession!

And even Jack Frost is his friendly agent—sponging up the soil, as leaven in the batch. And if he cuts down the leaves and blades, it is no unfriendly freak of his. They are not lost. Mother Earth takes them back to her bosom through the winter, to return them again in due season: or the winged messengers of the hills take to themselves their lawful portion only on deposit until checked for future use. All this is beautiful harmony in itself, creating, when understood, like harmony in the husbandman's mind. He should know his friends, and of whom they are. They will show to him a kind influence behind them—will say to him: *God is thy Father and thy Friend!* They are realizations, teaching him to sing:

"Earth, ocean, air, beloved brotherhood!  
If our great Mother has imbued our souls  
With aught of NATURAL piety to feel  
Your love, and recompense the boon with ours;  
If dewy morn and odorous noon, and even  
With sunset and its gorgeous ministers,  
And solemn midnight's tinkling silentness;  
If Autumn's hollow sighs in the sere wood,  
And Winter robing with pure snow and crowns  
Of starry ice the grey grass and bare boughs;  
If Spring's voluptuous paintings when she breathes

Her first sweet kisses, have been dear to us;  
If no bright bird, insect or gentle beast  
We consciously have injured, but still loved  
And cherished these our kindred:—then forgive  
This boast, beloved brethren, and withdraw  
No portion of your wonted favor now!"

Thus ends these essays. If they have created in the reader a sensibility kindred to that which has dictated them; if they have had a tendency to lead him to a better appreciation of the pleasures of a rural life, I have not written in vain.

N. M. H.—G.

Rock Hill, St. Louis County Mo.

### The Cereals of the United States.

In an address recently delivered before the American Geographical and Statistical Society of New York, by Mr. John Jay, allusion was made to the progress of American Agriculture. His estimates were predicated mainly upon the last census of 1850, as compared with that of 1840, which, if strictly correct, afford a subject for the serious consideration of every farmer. In wheat and some other staple products, it appears that there is a marked decrease. The same facts have frequently been alluded to before, and until the census of 1860, which is near at hand it cannot be determined with any degree of accuracy what the result of the last ten years will prove in that respect, but many interesting and instructing facts will be developed. In the estimates of Mr. Jay, the wheat crop of New England has rapidly declined, while in New York there has been a falling off from 12,000,000 bushels to 9,000,000; a decrease of 25 per cent: the increased demand being supplied from the North-Western States; the product in the Middle States being nearly stationary, notwithstanding the undeniable fact that an increased breadth of land is annually sown.

This fact should lead every intelligent farmer to pause, and inquire into the cause of this decline and endeavor to apply a remedy in the better management of his land—in manuring and improved methods of culture. While the average production of wheat in America is less than fifteen bushels per acre, in the old and long cultivated districts of England the average is nearly three times what it is in this country. An inquiry into the different modes and practices of culture in the two countries would readily throw light upon this important question.

The statement is further made in regard to rye, oats, Irish and sweet potatoes, hay and tobacco; taking the entire country at large there is a steady decline in the product. Hops have increased at the rate of 500 per cent., owing to the

enormous consumption of beer; rice has increased at the rate of nearly 300 per cent. Cotton has increased from 800,000,000 lbs. in 1840 to 1,088,000,000 lbs. in 1855. But the product of the great American staple—Indian corn—is far surpassing in amount our wheat, cotton and tobacco combined. Its cultivation and product has increased in every State: the crop of 1856 was estimated at 800,000,000 bushels, which is double that of 1840.

The experience of every year teaches us that Indian corn is to be the chief dependence as the staff of life in years to come, not only of the inhabitants of our own country, but of other portions of the world, and particularly of the manufacturing districts of Europe.

[Written for the Valley Farmer.]

### MISSOURI.

We have a few words to say of the great State of Missouri, which we may as well say now as at any future time; and if it shall be of any service the sooner said the better.

Intelligent men who have given the subject careful thought, are convinced that Missouri must act a conspicuous and vigorous part in the future of the affairs of this great continent. Her fine lands; her adaptation to fruit, the vine, to stock, and general farming; her rich fields of iron, lead, coal and marble; her central position; her length of river shore; her present advanced state, having the greatest city in the West and many fine towns—all conspire to give her an eminence which she may easily hold. Her railroad facilities have already become important, and are yearly increasing. It needs not the eye of a prophet to see her future importance.

But, she is in debt; she has more and still more to do for her internal improvements, roads, railroads, schools, colleges and asylums. She has but just begun her great works of public benefit. She must expend more and more every year. What shall she do, repudiate her debt, cry out against taxes, withhold private donations, let her improvements languish? No. Rather let her put forth her energies to develop her resources; let her farmers put new acres to the plow; new fields to grazing; new energies to the work of development. Let her mineralists wake up to their work and open new mines and fields of labor. Let the lumbermen bring their timber into market; let the saws fly nimbler and the axes play freer music to the solitudes of the forest. Let the yet quiet portions of the State resound with the hum of industry. Let every product be increased and new ones added to the list. So shall the State and the people be the more able to meet their liabilities, and to carry forward their works of general benefit.

The taxes of a State, if spent within the State, are no loss to its people. They are returned to them again in the shape of increased prices of

property, better markets, and increased facilities for exportation and travel. A million dollars well expended in railroads, increases the value of property in the State twice that amount. It may not do it immediately, but in the course of a few years it will.

Making a new State is like making a new farm. It must have its improvements, though it is a hard job to get them on. It is true it is best not to get much in debt in doing it. But should a great necessity come as has now come upon this State, the remedy is in the increased activity and industry of the people. The producing classes must redouble their zeal; and the non-producing must turn producers so far as possible.

Merchants must facilitate production so far as they can. Professional men must employ spare time and means in producing something that shall increase the property of the State.

The real wealth and worth of the State depends altogether upon its products. The products of every Western State are largely from the soil. Therefore, those who have an interest in the soil should multiply their forces and drive their business with increased energies to meet the emergencies of the times.

The only remedy for hard times is hard work—increased productions—a quickening of the pulses of life and labor. Let the farmers wake up, let the people wake up and develop as fast as possible the resources of our glorious State. \*

#### FISH PONDS.

"Three years ago," says R. Buchanan in the *Ohio Farmer*, "I constructed in a ravine a fish pond covering a surface of about three-fourths of an acre. It is fed by four small springs, and receives a large amount of surface water from the slopes around. It is fifteen feet deep at the greatest depth, and has shallow bays and inlets where the small fish may breed and find protection from larger ones. It contains a small island, and the shores are embellished with flags (*Iris*), water lilies (*Nympha odorata*), and other water plants. It was stocked with yellow bass, Oswego bass, white perch and every variety of sun fish and minnows, also a dozen gold fish (*Cyprinus auratus*). And now, at the end of three years, it is astonishing to note the vast increase in my scaly family. They have multiplied by hundreds, and grown in size beyond all my calculations. The gold fish number several hundred, some of them over a foot in length, and a few of them are beautifully marked with silvery sides, and red fins, head and tail; others with golden sides, and black fins and tail. I had no idea that they would thus sport in colors, but certainly they are very beautiful. The other fish have grown so much, that I intend to commence using them for the table, in autumn. I have not fed these fish, except for amusement and to tame them, when a few crumbs of bread are thrown in, from a small bridge, connecting the island with the shore, and the fish called up like chickens. The sun fish, gold fish, and smaller fry soon learned to come at my call, and to follow me in great numbers, from one end of the bridge to the other, for their morning or evening meal.

The young bass (the old ones hold back),

and the sun fish, dart to the surface for their food, and have a lively scramble for it; the gold fish pick up what sinks to the bottom. Their habits in this way are very much like a flock of chickens, for some of the smaller fish take their position immediately under my feet, to pick up the small crumbs that fall in breaking the larger ones to throw out. Some persons ring a small bell to bring up their fish, but I prefer calling mine. They do not appear to come from a greater distance than about forty feet to any one spot. I feed them in several places, to note the varieties and their growth. Now, as to the utility of this pond: it furnishes ice for my own use, and three or four of my neighbors who have ice houses; it also affords excellent stock water, and will doubtless hereafter supply my table with fish. A small skiff on its surface gives many a pleasant hour of recreation to the young people who are fond of rowing.

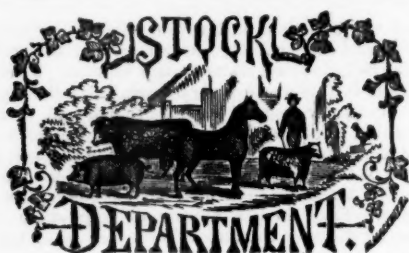
The construction of this pond was very simple. The earth was excavated across the ravine four feet deep and five feet wide for a foundation; then stiff clay filled in, and well pounded, to prevent leakage at the bottom. The earth from the bottom and sides of the ravine, was thrown on the top of this foundation, to raise the embankment to the proper height. A waste weir at one side, paved with flag stones, and two feet lower than the top of the dam, sufficiently large to carry off the heaviest flow of water in very heavy rains, guarded by a wire screen to prevent the escape of the fish, completed the construction. It is now sodded over, planted with willows at the foot, and considered safe.

The expense of making such a pond may be small, if a time is selected when other work on the farm is not pressing."

#### THE PROPER DEPTH FOR COVERING WHEAT.

—Numerous experiments have, from time to time, been made to determine the proper depth for covering wheat when sown, in order to secure the largest number, and strongest and most vigorous plants. Upon this point, something depends upon the character of the soil, and other circumstances. The natural requisites of germination, growth and maturity are a due degree of moisture, heat and air. In compact, heavy soils these are obtained in due proportions at a less depth than in more sandy, light soils. Wheat sown broadcast is usually covered all depths, from six inches to that which rests upon the surface, uncovered. The last is liable to dry up, or be devoured by birds or animals, while that which is covered too deep fails to receive due warmth and air, and consequently perishes.

Without reference to the peculiarities of soils, the average depth at which winter grain should be covered is from one to two inches; generally one and a half inches will prove the nearest right. In light soils, and in dry weather, two inches will be found not too deep. To always come within the range of these limits, and to effect the object most economically, the best form of grain drill is necessary. These can be adjusted to the proper depth required in any soil, and with equal accuracy the proper quantity of seed per acre can be measured.



**Feeding Standing Corn to Hogs in the Field: When Gathered, Ground and Cooked—Comparative Advantages of the three Methods.**

The method often practiced by large farmers of turning fattening hogs into the fields of standing corn, if properly conducted, has its advantages over that of gathering the corn and feeding it dry to the hogs in the pen.

The earlier in the season the process of fattening swine is begun the better, after the grain has reached a certain period of maturity, whether it be rye, oats or corn; because all farm animals, and hogs in particular, will fatten much faster in warm than in cold weather. And the grain between the periods of its doughy state and full maturity, or rather before it becomes dry, is more easily digested and assimilated and converted into flesh and fat than when it has passed into its dry state. It is clear, then, that the sooner the hogs are turned into the field after the grains of corn are fully formed, and while yet in the milk, the more speedily they will fatten; for if the weather be dry the corn hardens very rapidly.

A very interesting experiment in feeding hogs is detailed by Mr. James Buckingham in the *Prairie Farmer*. On the 6th day of September (in ordinary seasons corn, at this date, is too far advanced to commence feeding to the best advantage), the hogs, 189 in number, were weighed, which footed up in the aggregate 19,600 lbs. A movable fence was used, confining the hogs to an area sufficient to afford feed for two or three days. The entire field thus fed contained forty acres, with an estimated average of forty bushels per acre. The consumption of this corn gave a gain of 10,740 lbs. The hogs, when turned into the corn, cost three cents per pound—equal to \$588; worth, when fed, four cents per pound, or \$1,213.60, giving a return for each acre of corn consumed of \$15.64. Adding to this \$1 per acre for the improvement of the land by feeding the corn on the field, making the actual gain per acre \$16.64, equal to forty cents per

bushel, standing in the field. The whole cost of corn per acre, exclusive of interest on the land is set down at \$3.65.

By way of comparing the advantages of ground and cooked food over that which was merely ground, and that which was unground, Mr. B. put up three hogs into separate pens. To one he fed two and a half bushels of corn in the ear, during a period of nine days, feeding all he would eat; this gave a gain of nineteen pounds; another eat in the same time one and three quarter bushels of corn, *ground*, and gained also nineteen pounds; and to the third, he fed one bushel of corn *ground and boiled* which gave a gain of twenty-two pounds. By this it will be seen, that one and three quarter bushels of corn when ground will give a gain of flesh equal to two and a half bushels of unground corn, and that one bushel when *ground and cooked* gave a gain of twenty-two pounds.

The comparative results of these three methods of feeding may thus be set down: one bushel of corn ground and cooked is equal to nearly three bushels when fed dry and unground; and one and three quarter bushels when ground and uncooked is equal to two and a half bushels when fed whole.

Or it may be stated thus:—One bushel of dry corn in the ear makes 8½ lbs. of pork, @ 4 cents per lb is equal to 33 cents per bushel for the corn; while 1 bushel of corn, ground and boiled, makes 22 lbs. of pork, @ 4 cents per lb and is equal to 88 cents per bushel for the corn. This result about sustains our calculations made upon the experiments by Mr. Samuel H. Clay, of Kentucky, as appeared in the *Valley Farmer*, in 1857.

Had the hogs been turned into the field when the corn was in the milk it would have given a result more nearly like that of the hog fed upon ground and cooked food.

The obstacles which seem to be in the way of adopting an improved method of fattening hogs result from the imperfect apparatus used for preparing the food. Sending corn a long distance to mill to be ground, and then to cook the meal in an ordinary kettle, even if it holds a barrel, will prove an expensive operation, as all have found who have undertaken it. But to realize the full advantages of feeding prepared food, a complete grinding and steaming apparatus must be erected on a large scale, with the view to perform the grinding, cooking, and feeding, with the greatest facility and at the least possible cost. This may be done to advantage by employing steam for grinding, using the same boiler to furnish steam for cooking the meal.



[Written for the Valley Farmer.]

### PLEURO-PNEUMONIA.

BY HENRY CORBY, VETERINARY SURGEON, ST. LOUIS.

Among the farmers of the West, the main interest attaching to pleuro-pneumonia, lies in the probability or possibility of its extension hither; so long as it does not reach their herds, they have only to consider the means of prevention and not of cure.

Various agricultural societies, holding or about to hold their annual exhibitions at this season, have wisely resolved not to admit any animals from districts in which this disease prevails; and thus prevent danger from the bringing thence of cattle that may possibly carry with them this malady.

But while prudence dictates a careful avoidance of risk in this respect, it is not well to allow unnecessary alarm to prevail; and I therefore wish to direct the attention of the readers of this journal to the following extract from the Worcester (Mass.) *Spy*, which shows how unfounded are some of the apprehensions entertained in regard to the easy spread of the disease:—

"Yesterday the two commissioners and one of the medical examiners, Dr. Martin, with some other gentlemen, went to East Lexington, where the disease was supposed to be. As this case is quite instructive, we hope it will have due attention. The allegation was that there were three cows in East Lexington that were badly affected by the disease, that they had taken it from Mr. Chenery's oxen, and that two heifers that had run with these cows had carried the disease into New Hampshire. A pair of Mr. Chenery's oxen had the disease in 1859, and recovered from it, so that in November of that year they were well and were as capable of work as before, and they have been worked regularly ever since.

"On the 11th day of May, 1860, these oxen stood in the barn of Peter Wellington, in East Lexington, long enough to have the wagon attached to them loaded with hay. In this barn at the time were three cows belonging to Edward Mullikin, and on the premises somewhere—perhaps near the barn, and perhaps at a great distance from it, no one knows certainly—were two heifers that were very soon afterwards taken into New Hampshire.

"It is believed by intelligent experts that the oxen were at that time no more capable of communicating the disease than if they never had it; but others, with a feeling of panic in their bones, maintained that the cows had taken the disease and were terribly afflicted with it. After an examination yesterday two of these cows were slaughtered, but not a sign of the cattle plague could be discovered. They were entirely free from it, and always had been so.

"This result was contrary to the confident expectations of some of those present. It shows how utterly unwarranted are some of the panics that spring up suddenly in various localities, and how much need there is of judicious management on the part of those who have charge of the matter. This case also makes it probable that the panic that has been started in New

Hampshire is without cause. There is no reason to believe that a case of the disease has occurred in that State."

I think that the course taken by the Massachusetts commissioners has tended to create unnecessary alarm; they seem to have thought that the only safety for the cattle of this country lay in the immediate destruction of all those that had been in any way exposed to a possible danger of infection; and they report that out of one thousand and seven animals destroyed, only one hundred and eighty-five were diseased. Truly this wholesale slaughter cannot have been necessary; though in justice to the commissioners it must be remembered that their instructions, under the act of the Legislature, confined them to this mode of checking the spread of the disease.

But the danger of the introduction of this disease into the Western States is not confined to the importation of cattle from Eastern localities; whenever cattle are purchased in Europe and brought hither they may bring this pleuro-pneumonia with them; and in view of this probability, it would be well that any person importing cattle either from Europe or from the Eastern States, should keep such cattle separate from all others for at least two weeks after their arrival. If they appear to be in perfect health at that time, and no cough has been heard, they are not likely to be affected with this disease.

I do not say that this precaution will prevent the disease from ever appearing among us, because it may develop itself independently of foreign importation; but I do firmly believe that it will avert the danger of its introduction by imported cattle.

### CHESTER COUNTY HOGS.

Mr. Aug. Shriver, a respectable planter of Maryland, thus speaks in the *American Farmer* of this excellent breed of hogs:

"You say 'you would like to know from farmers who have had this stock for several years how they compare with other breeds'? In answer thereto I propose giving the result of my own experience with them. I have had the Chester County breed for about nine years and have had many opportunities of comparing them with the ordinary stock, and also the old Berkshires, and have found them in all cases under the same treatment to maintain their superiority in an eminent degree. I am no fancy farmer and do not keep any stock for ornament or exhibition, but bring it down to the practical point of dollars and cents. It is therefore enough for me to say that I consider the Chester County breed as the most profitable under all circumstances, both as a pen hog and as a grazer, of all the different breeds that I have ever owned.

They possess in an eminent degree the very desirable qualities of early maturity and fattening at an early age, which latter quality with me is the most important as I am thereby enabled to put my spring pigs into the market at nine or ten months old, weighing at that age from two to two hundred and fifty pounds. This weight is produced of course by good feeding and proper

attention. My fall litters, which I keep over winter, are turned out early in the spring on clover, and seldom receive any other food than the run of the wheat stubble until they are put up for fattening, when I usually have them to weigh from three to four hundred pounds at about fourteen or fifteen months old. A friend of mine has now a lot of six which he is keeping in high condition, which he expects to make average five hundred pounds at eighteen months old, and I have no doubt they will do it.

I wish it understood that in giving my views of the above hogs I am disinterested, having none for sale, nor have ever offered them for sale, though the effect of my success with them has led to their general introduction and they are gradually superseding all other breeds in my neighborhood, where the farmers are noted for their practicability and aversion to all humbugs."

### T. S. GOLD ON SHEEP.

The following is from the National Agricultural Society's report of the New Haven lectures:

"In his lecture on the care of sheep, Mr. Gold stated that it should always be the object of the flock-master to keep his sheep in a thriving condition. The quality of the wool, as well as its quantity, and the general productiveness of the flock, demand this system.

*Shelter* is the first necessity in providing for wintering sheep successfully. The Southdowns will bear exposure better than any other class of sheep. The open fleece of the long-wooled, parts on the back when wet and admits the water, which completely drenches the animal, so that his abundant fleece is no longer a protection from cold.

*Economy in feeding* demands shelter for all sheep, as not only less food is required, but, also, it is better preserved from waste. Water-soaked hay, or that which is in any way soiled, is always rejected. The improvement in the quality of the *manure* forms another argument in favor of shelter. That this is not only healthful but grateful to the sheep at all seasons of the year, we see in the fact that even in summer they will seek their winter sheds at the approach of a storm if they are within their reach.

*Ventilation* is of paramount importance as connected with shelter; and to insure this, sheds open to the south are to be preferred. A stable with an open window will answer for a small number, but the crowding of a large flock in such a place affects the organs of respiration, and may result in serious disease, and should never be tolerated.

The best form of *rack* has posts three feet high in the corners, a bottom of boards, the sides and ends of two boards each, and the lower one the widest, with narrow perpendicular strips nailed on to keep the stronger sheep from crowding the weaker. The spaces are larger in their perpendicular than their horizontal opening. The size of these, as well as the width of the rack, must be in proportion to the size of sheep. Not more than one hundred of the fine-wooled sheep should be confined in the same

yard, while the long-wooled will not thrive with more than twenty-five. A *hospital*, snug and comfortable, should receive any sheep that may be weak from age or disease, until, by careful feeding and nursing, they can be returned to the flock.

It is the worst possible practice to allow the sheep to fall away in flesh as the grass fails in autumn. The increasing wool conceals the shrinking carcass, much to the disappointment of the careless flock-masters. Better confine them in the yard than allow them to ramble about in search of some field of winter grain, which furnishes a little green food, but too light to be of any real value.

*Winter fodder* should embrace, in addition to the dry food, a due proportion of that which is green and succulent. Fine early-cut clover hay, well cured—that from old meadows, consisting of a variety of grasses—forms the best dry fodder. *Economy* demands that the quality should be good, else much waste ensues; yet the sheep is very fond of variety, and almost all of the so-called weeds become a choice morsel. The botanist knows full well that a sheep-range will be most barren of the objects of his search. The immortal Linnæus tested the plants most indigenous to Sweden by offering them, fresh gathered, to the various domesticated animals. Horses ate 262 species, and refused 212; cattle ate 276 species, and refused 218; while sheep took readily 385, and refused only 141 species. For fattening, add to the hay, roots, grain, or linseed, or cotton seed meal. The English system of winter feeding on turnips in the field is here prevented by excessive cold. Use them in the yards in moderate weather. Sudden changes from green to dry food, and the reverse, should be avoided. Regularity in the hours of feeding is very important.

The amount of fodder varies with the kind of sheep, though it is not directly proportioned to the live weight. Ten small, fine-wooled sheep will eat as much as a cow, the larger ones requiring more. Two to two and a half, or even three and one-third per cent. of the live weight in hay value is estimated by different authors as daily required.

No other animals except calves should lie in the yards with sheep. The losses from the horns of steers and the heels of colts more than balance any supposed gain. As the breathing of the sheep on the hay does not of itself render it distasteful to cattle, it may be gathered from the racks and fed in another enclosure.

It is estimated that 300 pounds of good hay will winter a small sheep, while larger ones may take three times the amount.

*Water* is absolutely necessary to the thrift of the sheep in the winter. It is best brought into the yards, as the steep banks of streams prove dangerous to the sheep.

*Salt* may be provided in winter by a moderate salting of the hay—two to four quarts a ton; but excessive salting must be avoided, as on such neither sheep nor cattle will thrive.

As the lambing season approaches, snug quarters must be provided for the breeding ewes, where they can be clean, warm and dry. They

will seek the necessary seclusion in the open field.

The increase from a flock of merinos, Saxony ewes, which rarely twin, may be from 80 to 100 per cent., while in the Southdown or Cotswold, 150 per cent., or even more, may be raised.

Little can be hoped from legislative action as a protection from dogs. Bells attached to the necks of a few sheep in each flock deter the cowardly curs, or give warning of their attacks.

Sheep washing, shearing and rolling the wool, demand careful attention. Diseases come mostly from carelessness, and prevention must be our resource. The age of the sheep is determined by the teeth, but such irregularities arise in these as well as in other animals, that the Connecticut State Agricultural Society have decided to receive satisfactory testimony as to the age of any animal rather than to depend on the indications of the teeth.

Of the three breeds on the stage, for the food consumed, the Merinos yield the most wool, the Cotswolds the most mutton, and the Southdowns mutton of the best quality.

The celebrated experiment of Laves and Gilbert in England on 50 sheep, each of the most celebrated British breeds, prove the Cotswold as giving for the food the most wool and mutton; the Southdown the least yet sold in Smithfield—the Southdown brought three cents per pound the most, so that the results as to profit were equal.

The Southdown is eminently fitted for the light lands of New England, and when sheep husbandry shall have attained its proper place it will be found as a chief instrument in that result, and their flocks will cover a thousand hills.

#### Treatment of Mares with Foal.

The usual period of gestation in the mare is from forty-eight to fifty-two weeks, but she sometimes varies from forty-six to fifty-four weeks. Some writers have asserted that the mare goes with foal eleven months and as many days as she is years old; others that she goes eleven months with a mare, and twelve months with a horse colt; but there is no dependence to be placed in such rules. In some instances I have known mares to foal horse colts in ten months and two weeks, and in others to go a year and upwards, and yet bring forth mare colts; one year a mare to foal in eleven months, and the succeeding year the same mare to go three weeks longer, and in both cases had fillies. Out of a record of eighty mares kept in one season the average period of gestation was eleven months and one week; of these there were forty horse colts and the same number of fillies; the horse colts averaging one day the longest, which was caused by one very old mare going over a year. These facts prove the fallacy of such predictions.

After your mare has been put to the horse of your choice, she should not be confined too closely during her pregnancy. A run to grass four or five months would be highly advantageous. But if her services are needed either for agricultural or other purposes, she may be kept

at moderate work from the time of connection up to the period of foaling, not only without injury but with decided advantage. Moderate exercise is essential to the production of healthy offspring. When half the period of pregnancy has expired, she should be more generously fed, as by this time the fetus will be making greater demands on her for sustenance, and she should therefore be allowed one, two, or three feeds of grain a-day, according to her condition and the amount of labor required to perform. This is also the period when abortion is most likely to occur. The mare is in danger of slinking her foal from foul blows, over exertion, the use of musty hay or grain, and offensive objects of smell or sight of any kind. Good feeding and careful exercise are the best preventives of this misfortune. The mare should not be let out or exposed to cold winds and storms, and at night she should be placed in a wide stall or loose box well littered with clean straw, affording her a good bed, which will add much to her thrift and comfort; she should also be curried and rubbed down, if worked, at least once a-day.

When the mare is near foaling she should be by herself, either in a small lot or good roomy stable, under the frequent inspection of her owner or some careful person. The approach of parturition is indicated by the formation of milk in the udder and the filling up of the teats; milk often flowing out a few hours before delivery. She must now be closely watched, as many a fine colt has been lost by being suffocated in the sheet. If the mare has been well taken care of while in foal, and is in good health, but little danger will attend the act of parturition. When all is right she will be delivered in a very short time; if, however, there appears to be any great difficulty in producing her foal a little gentle assistance is sometimes necessary.

The act of labor over, it is necessary to secure the cord by a ligature near the colt's body—the cord may then be severed by a sharp knife. This practice I have never seen recommended, or heard considered as necessary, but I am fully satisfied of its importance, as in some cases I have found the cord so strong that disastrous consequences would certainly have attended its violent rupture. It will be better to leave the mare alone for an hour or so, that she may be permitted the natural operation of licking her foal undisturbed, and that it may gather strength sufficient to enable it to rise. When once upon its feet, and having learned to suck, there is but little danger but that both mare and colt will do well.—[*American Stock Journal*.]

**CONDENSED MILK.**—The Hartford (Ct.) *Homestead*, gives a detailed description of a "milk-factory," which a Mr. Boraden has put in operation "in one of the wildest gorges of the Litchfield hills."

"The long and short of the whole process is, that fresh milk is received night and morning, and condensed to one-fourth its original bulk by evaporation, and in this shape, that is, looking like very thick cream, it is sent to market, requiring only to be diluted with as much water as has been removed from it, to be as perfect and

excellent milk as it was at first, and, in fact, a little better, as we will explain. The cost in market is 26 cents per quart, or 6½ cents for a half pint, which by the addition of three half pints of water will make a quart of milk decidedly better, more healthy, and less watered than the milk bought of milkmen in our cities; and capable, after being diluted properly, of answering all the purposes of the best milk. The cream will rise as usual, and butter may be made, and the milk will show itself possessed of all the properties of fresh milk."

The writer regards it as a most valuable discovery—a saving of three-fourths of the expense of transportation is made, and the milk thus prepared remains sweet so long that it may be sent from Connecticut to New York or Boston, and arrive in a condition to keep longer than milk fresh from the cow.

#### EFFECT OF PUMPKIN SEED ON MILCH COWS.

—Pumpkins are regarded as an excellent food for cattle, horses and swine, in connection with some other kinds of food of a more concentrated character; but it has often been claimed that pumpkins fed to milch cows would dry up their milk; and, although the fact is undeniable, yet there are many farmers who are unable to account for the cause. A knowledge of the medicinal properties of the seed will at once explain the matter. Pumpkin seeds when fed to animals have a powerful diuretic tendency, and when eaten by milch cows act precisely the reverse upon the lacteal organs and rapidly dry up the milk. In feeding pumpkins, therefore, to cows the seeds should always be removed. The seeds in the neighborhood of seed stores will generally command a price that will pay for saving.

A correspondent in the *N. E. Farmer* speaking on the subject, says:

"First, I fed my cows one week with one large or two small pumpkins to each cow twice a day. Their milk decreased two or three quarts to each cow a day, from what they gave the first week previous. I then fed them one week with the same quantity of pumpkins as before, and took out the seeds. They increased in a greater proportion of milk than they decreased the previous week. I then fed them alternately, three or four weeks, and they varied in their milk, very much as they did the first week."

This fact is important to farmers and should be remembered.

**MILKING OFTEN.**—I have never practiced milking more than twice a-day, because in spring and summer other farm work was too pressing to allow of it; but there is no doubt that, for some weeks after calving, and in the height of the flow, the cows ought, if possible, to be milked regularly three times a-day—at early morning, noon and night. Every practical dairyman knows that cows thus milked give a larger quantity of milk than if milked only twice,

though it may not be quite so rich; and in young cows, no doubt, it has a tendency to promote the development of the udder and milk-veins. A frequent milking stimulates an increased secretion, therefore, and ought never to be neglected in the milk-dairy, either in the case of young cows or large milkers, at the height of the flow, which will ordinarily be for two and three months after calving.

The charge of this branch of the dairy should generally be intrusted to women. They are more gentle and winning than men. The same person should milk the same cow regularly, and not change from one to another, unless there are special reasons for it.

**HIGH PRICES FOR HORSES.**—Agreeably to notice, the sale of horses belonging to R. S. Denny, Esq. of Clappville, Me. took place on the 6th inst. We were unable to attend, but are informed by several gentlemen who attended, that the company was large, considering that the day was very rainy, and the sale was satisfactory to all parties. Twenty animals brought an aggregate of \$15,267—an average of \$793 each. We can only notice a few of the prominent items. Miles Standish, four years old, by Black Hawk, dam Mary Taylor, a very superior colt, entire, sold to E. D. Bush, of Shoreham, Vt. for \$2,400. John Alden, three years old, own brother to the above, was struck off to N. H. Hill, of Boston, for \$1,050. Garibaldi, two years old, by Ethan Allen, from the same dam as the above, was also bought by Mr. Hill for \$1,000. Pocahontas, the celebrated pacing mare, was bought by E. E. Bush, of Shoreham, Vt. for \$3,450. Ninon, Pocahontas' yearling filly, by Ethan Allen, was sold to E. Sargeant, of Leicester, for \$2,300. Mary Taylor, eighteen years old, sold to S. F. Bucklin, of Marlboro, for \$400—cheap enough, if she rears a few more foals. Narmeoaka, a pacing mare, thirteen years old, with a colt at foot by Miles Standish, sold to Joseph Burnett, of Southboro, for \$410. Priscilla, a yearling filly, from the above by Ethan Allen, sold to T. S. Lang, of Vassalboro, Me. at \$475.—[*Boston Cultivator*.]

**BUILD HIGH STABLES.**—That is, high between floors. Most stables are built low "because they are warmer." But such people forget that warmth is obtained at the sacrifice of the health of the animal and pure air. Shut a man up in a tight small box. The air may be warmed, but it will soon lay him out dead and cold if he continues to breathe it. If stables are tight they should have high ceilings; if they are not tight, but open to the admission of cold currents of air from all directions, they are equally faulty. A stable should be carefully ventilated, and one of the cheapest modes is to build a high one.

**SAND FOR HORSES' BEDS.**—Mr. Small, of Durdalk, a veterinary surgeon, of considerable experience, states that sand is not only an excellent substitute for straw for horses' beds, but superior to straw, as the sand does not heat, and saves the hoofs of the horses. He states that sand is exclusively used for horses' beds in his repository.





## HORTICULTURAL.

### Advantages of Under-Draining Orchard Lands.

Since the introduction of under-draining in the United States, some of our most intelligent fruit growers have concluded from its effects upon common farm crops that it would prove still more beneficial upon orchard crops. The trials that have been made have fully confirmed this opinion. The drained orchard is more certain to produce a crop, and is a great step towards rendering the business of fruit growing profitable. Draining secures a more uniform supply of moisture: in a wet time it makes the soil more dry; and in dry weather the sub-soil is more moist—essential requisites to a full and healthy maturity of the fruit. Upon a soil naturally wet, draining promotes the healthy growth of the trees, and prevents the injurious effects of late spring frosts; besides, a drained soil is much warmer than one saturated with water. While excessive evaporation is going on, which is the case from land surcharged with water, the land parts with much of its heat, and hence draining renders the land warmer than that which is not drained; besides, a healthy growth cannot be expected from trees where their roots, for half the year, are submerged in water. This explains the cause why apples so generally rot on the trees when the early part of the season is unusually wet, and the latter part dry.

It is but a small matter to drain an orchard of three or four acres, provided it is so situated that you can find an outlet for the water. Now is the time to begin to think about preparing the land for setting trees the coming fall, and there is no better time to lay drain tile than the present. But orchards already planted may as easily be drained. If the soil is very compact and retains moisture it would be well to run a row of pipes between every two rows of trees. If placed as near as this, smaller tile will answer the purpose. Frequently drain tile are placed sixty feet apart, but for an orchard it would be better

to run them nearer. Of course, we can lay down no definite plan, because this must be determined by the situation of the land and its surroundings. Experience should dictate that the land chosen for an orchard should be as high as any on the farm, which will gradually render an outlet for the water available. Persons not acquainted with the process of laying tile would do well to purchase a work on the subject, several of which have been published, and may be had generally at the book stores, where agricultural books are kept.

All those who have applied the system of under-draining to orchards are fully convinced of the benefits of it, and regard it as a profitable investment, and that the certainty of the return in the greater quantity, and improved quality of the fruit, offer sufficient inducements for every one to adopt the measure where their orchards occupy a wet soil.

### NEW STRAWBERRIES.

The success of a few persons in raising new seedling strawberries, considerably improved compared with the kinds we had twenty or thirty years ago, has encouraged numerous amateur horticulturists and nurserymen to raise seedlings with the hope of still further improvement. A number of these efforts have been rewarded with remarkable success, until it seems difficult to predict how far this excellent fruit is susceptible of improvement; yet among the many improved varieties, of American origin, recently brought into notice, none seem to combine all the desirable qualities of a first-rate fruit. As it regards size, productiveness, firmness and beauty of color, Wilson's Albany is all that can reasonably be desired, but with ordinary culture it is a little more acid than we would wish; nor does the flavor come quite up to the best varieties, while we could wish the fruit stalk was somewhat longer and more firm; but with these objections we know of none to which we would give the preference over this as a market berry, or even for home consumption where we were limited to a very small garden.

Downer's Seedling, of Elkton, Ky. and Austin's New Seedling, of Shaker Village, Watervleit, N. Y.:—Superior excellence is claimed for both of these new varieties, but they will require to stand another season before their merits can be established or their adaptation to the various sections of the country can be known. We know of a large number of other seedlings under trial, from which we hope to approach perfection by and by.

The *Gardener's Monthly* for July, comes to us with a colored engraving of a new strawberry, the Wizard of the North, which is represented as of extraordinary size, exceeding six inches in diameter. It is an English seedling, and was raised by Mr. Robertson, of Linside, Eng. in 1853, and is said to be the largest variety ever grown. It was exhibited in 1855 before the Paisley Horticultural Society, and received the first premium. A single plant shown at that time, yielded seventy berries, many of them of extraordinary size, the largest being  $9\frac{1}{2}$  inches in circumference, though it had been planted but fifteen months. What this will do when transplanted on this side of the Atlantic time must determine. The English varieties generally have not succeeded as well as our native seedlings, and like our grapes we must endeavor to improve our own varieties and equal, if not surpass, the Wizard. We have no idea that we have yet reached the limit of improvement.

#### FRUIT BUD GRAFTING:

OR, A NEW METHOD OF FERTILIZING BARREN TREES.

EDS. VALLEY FARMER:—Upon seeing the above-entitled article in the June number of your excellent periodical, I thought it would not be amiss to give to your readers some facts and suggestions relative to "Fruit Bud Grafting," which result from observations *this side* of Paris or London. It occurred to me that in confining the new system of grafting to the single purpose of "fertilizing barren trees," and the concomitant advantages resulting therefrom in the way of checking the exuberance of wood and foliage, that you are greatly limiting the range of its advantages. You are giving this system of grafting no prominence at all, except as the means of the one result contemplated in the article referred to, which I take to be the exponent of the views and objects entertained by the Paris Horticultural Society.

I believe you claim for this Society the merit of exclusive originality in the production of this mode of grafting; and I suppose that, for the purposes *had in view*, they deserve the credit of its discovery. But, believing that this mode might with great advantage be generally adopted as a method or system of grafting upon poor fruit bearing trees from any cause save decay, I will state the result of an experiment made by my father (Rev. John F. Strother) three or four years since in Henry county, Kentucky. In a tree, *not remarkable for the growth of wood*, but on the other hand a tree of ordinary productiveness of both wood and fruit, he grafted several fruit spurs in accordance with the method described in your article (then unheard of by him), the result of which was in almost exact accordance with that of the Paris experiment. That is, the sap seemed directly diverted from its natural channel into the new growth, which took immediate and firm hold upon the old limb, and grew off

rapidly with an early yield of fruit; while the old stem seemed henceforth to be utterly superseded in both growth and fruit bearing. So that the experience of my father not only enables him to attest the virtue of this new method of fertilizing, but also affords ground for believing that the fruit bud grafting may and should be adopted throughout the country at large for the purpose of crowning the worthless orchards of every farmer with delicious varieties of fruit in place of the tasteless seedlings that are scattered all over the land. There is scarce a farm orchard in the country that has not many trees that bear worthless fruit that might be made by this means to bear excellent fruit in a very short time. It may be objected that a graft so inserted would be easily broken off, since it would not take permanent hold of the parent stem; but this is a mistake. Those that I have seen and mentioned, but recently withstood *uninjured* the furious storm that hurled down the largest forest trees, and when a tree in the same orchard was blown some distance from an equally exposed situation. I should like to hear more upon this subject.

Yours,

J. P. STROTHER.

Henry Co. Ky., July 27th, 1860.

REMARKS.—The method of grafting referred to is not original with the French. It has been often practiced by many orchardists. We practiced it many years ago, but not for the specific object set forth in the article referred to. The system is known under the name of *side-grafting*, though it is not always that fruit spurs are selected for grafts.—[Eds. Valley Farmer.]

MULCHING STRAWBERRIES.—A correspondent inquires whether sawdust is a suitable material for mulching strawberry plants. In the absence of better materials sawdust will do, but something depends upon the variety of the wood from which it was made, and upon its age or the period since it was cut. Sawdust from oak and some other kinds of wood becomes exceedingly acid, and should remain in the bed or heap a year or two exposed to the weather until fermentation has subsided and the sawdust becomes partially decomposed before it is used. Poplar, sycamore and similar kinds of wood we should prefer to oak. Old tan-bark, if convenient, is better than sawdust; but half-rotted leaves from the forest is better than either. We use them liberally in the fall to protect the plants from frost during the winter, and in spring they check the growth of weeds and answer an excellent purpose in keeping the fruit clean when ripening, as well as serve to keep the ground moist; and when decomposed and worked into the soil during summer cultivation constitute the most natural manure for the plants. We have a large collection of leaves

that are raked up during the winter and spring from the yards and garden, these are thrown into a heap, and it is always easy to select an abundance of these in the right stage of decomposition for mulching. When leaves are not convenient, we have used cut straw or short litter, from the stock-yard. But it is important to select such materials for mulching and manuring the strawberry as are free from the seeds of noxious plants.

[Written for the Valley Farmer.]  
**HORTICULTURAL NOTES AND  
 GLEANINGS.**

BY CAREW SANDERS.

**DESCRIPTIVE LIST OF SELECT PHLOXES.**

The subjoined list embraces some of the finest phloxes in cultivation; all, with one or two exceptions have flowered in our collection the present summer, and we can vouch for the accuracy of the descriptions. Most of the varieties are enumerated in the latest catalogues of European florists, at high prices, consequently are quite new, and comparatively rare as yet.

We only aim here to give a short select list of the very best kinds, and differing as much as possible in color, habit, time of flowering, &c., so as to include in a small collection all the leading colors and other good qualities. The perennial or garden phlox is divided into two classes, the first of which may be known by the smooth, glossy foliage, generally pointed or lance shaped, and in their dwarfish habit and earlier season of commencing to bloom; these range from one foot to two in height, and commence to flower in May, continuing on at intervals during the season. The other class commences to flower in June, grows from two to three feet high, has rough downy leaves and stems, and larger trusses of flowers. The attainments of the florist on these, as on other florist's flowers, are, flowers circular in outline, with the notches in the petals well filled up and smooth, good substance of petal, large, with distinct, vivid and contrasting colors. Dwarf sturdy habit of plant, with immense broad flat, or long spike-like trusses of flowers.

*Suffrutescent or Dwarf Varieties—Early Flowering.*

Abdul Medjid Khan: Clear white, with bright purple marks at the base of each petal, flowers large and beautiful.

Addisonii: Very large, round, smooth, white, purple crimson eye, strong grower, extra fine.

Roi de Leopold: White, striped and flamed with rose purple in dense spikes; habit very robust.

Countess of Home: White, shaded with rose, large purple crimson eye, fine form, distinct and exceedingly beautiful.

La Croix de Honneur: A distinct purple and white cross, flowers and truss large and beautiful.

Dr. Lardenelle: White, with large purple eye, form round and fine.

Madame Nerard: Blush, shaded white, with crimson eye.

Admiral Dundas: Deep purple crimson, very large, robust habit, a splendid variety.

Rival: Large, pure white flowers in long pyramidal spikes, strong grower and fine.

Gracilis: Slender and dwarf, blush, clouded with dark rose, deep crimson eye, distinct and pretty.

Ondine: White, veined and shaded with lilac, extra.

Van Houtteii: An old variety, but good as yet, distinctly striped with rose and white; hardy free bloomer.

*Decussata; Tall Varieties; Late Flowering.*

Madame le Cerf: Pure snow white, fine form, large compact truss, very fine.

Madame Fontaine: White, with bright crimson eye, good.

Marie Culbertier: New; French; white crimson centre, extra large spike, and very dwarf.

Chauteaubriand: Soft satiny pink or peach, a novel and beautiful color; very free bloomer.

Triumpe de Beauty: New; deep rich purple crimson, perfectly round, a splendid variety.

La Croix de St. Louis: Lilac, petals edged with broad stripe of white, broad flat truss, very fine.

Victorine Vatalle: White, with purple eye, shaded deep lilac.

Cleopatra: Bright deep pink, compact flat truss, fine.

Julia Rousel: New; white, round, petals thick, with a large deep crimson eye, splendid trusses, a superb variety.

President Morel: Reddish violet purple, rich and extra fine.

Henriette Castelle: Bright rose, light eye, large and fine form.

Madam Dargent: New; light rosy lilac, good form; dark eye.

Imperatrice Eugenie: Pale peach, or creamy white, with large conspicuous rosy purple eye, fine form, extra.

Medina: Pure white, large rosy centre, large and splendid truss, a lovely variety.

Crepuscul: Lilac, changing to white, large dark eye.

Madame Durdan: Deep rich red, very fine.

**THE NEW GRAPES IN IOWA.**

Mr. James Smith, of Des Moines, Iowa, an eminent pomologist of that State, and chairman of the Fruit Committee of the Iowa State Agricultural Society, in a correspondence, writes thus of the new grapes.

"The Delaware grape is doing finely with me this year, notwithstanding I put them as deep into the ground as I could, to let a bit remain out. Rebecca, too, has stood our extreme drought and excessive hot weather, without scorching a leaf, and in fact, I consider it one of the healthiest (though slender) of twenty sorts I have in cultivation. But the Concord is the grape for this country. My original vines that were direct from Mr. Bull, five years in my garden, stood out on a trellis last winter, without a particle of protection from any quarter, and came out this spring sound, and have now a heavy crop of fruit.

There is one peculiarity of the Concord that I do not recollect of seeing anywhere stated in print,

which is: It does not bud out for a week or more after the Isabella and other sorts, and will sometimes escape late frosts in consequence."

#### FOREIGN VARIETIES OF STRAWBERRIES.

The principal objection urged against foreign varieties of strawberries, is, that they will not stand our climate, that they burn out under our scorching suns in summer, and can not be relied upon as standing our winters well. For a number of years all foreign varieties were decried, and none but natives were recommended to be cultivated; of late, however, several of the new and fine foreign varieties have been tried again, and now seem to be rapidly coming into favor, having proved hardy, good bearers, and of superior size and quality: indeed in some localities they contest the palm well with the best domestic kinds, receiving nearly as many votes for general cultivation as the latter.

Of about twenty varieties of English, French and Belgian origin, that we have cultivated in our grounds this summer, the whole batch has stood the long and severe droughts and excessively hot suns, fully equal to as many of the best native varieties: indeed better; for while we have lost many plants of McAvoy's Superior, Longworth's Prolific, and even a few of Wilson's Albany, from burning out, not a plant of the others have we lost, and they are now as vigorous and strong in foliage, and making runners as fast as any kinds we have; and we have no fears but with a little protection they will winter well, and think we shall be able to show the lovers of good strawberries next season, berries, which for size and richness of flavor, will please and surprise them. Our varieties consist of, Triomphe de Gand, Trollope's Victoria, British Queen, River's Eliza, Sir Walter Scott, Madame Vilmorin, Sir Adair, Excellente, Honneur de Belgique, Amazon, Keen's Seedling, and others, most of which sorts came from Mr. John Saul, of Washington, D. C. who imports direct, and has the reputation of carefulness and reliability in his collections of strawberries, and we have no doubt whatever of their genuineness no more than we have that some among them will prove valuable in our climate.

Downer's Prolific appears to be a vigorous, robust growing sort, with thick foliage, that does not burn, and a great remove from those old weedy sorts, the Scarlets—and we confess to have great hopes of it.

#### FRUITS IN SEASON.

Our thanks are due to our friend Mr. Addis, of this city, in giving us the opportunity to examine his fruits, as they ripen along in succession, consisting chiefly of pears, peaches, and some cherries, specimens of which he has kindly sent for our inspection at different times as they ripen. Mr. A.'s varieties clearly show that he has got into a collection of French introduction. For we first have the Little Muscat, a very small French Pear, now discarded; then there is the Julienne, called also the Summer Butter Pear, a really excellent, medium sized, clear yellow pear, of good quality. A little further on he has the Summer Bergamot and the French Jargonelle, which last is an exceedingly hand-

some pear, of medium size, long pyriform, with a bright red cheek, one of the highest colored of all pears, which makes it very saleable in market, and Mr. A. assures us that it does not rot at the core as soon as ripe and is gone in a day, as the books say, but keeps sound so as to market to advantage.

Mr. A. has also Bartlett and Seckel and other of the more modern varieties, and admits that the old French kinds cannot come up to them for good qualities, whether for market or family use.

#### NEW BOOKS.

*The Hand Book, or Annual Record of Horticultural and Agricultural Statistics*—Compiled from various sources, by Wm. P. Sheppard, New York. The deep and growing interest taken in all Horticultural as well as Agricultural matters, throughout this country, in the last few years, and the desire to introduce everything new that promises to be of value, whether in fruits, flowers, vegetables or cereals, has led to a largely increased trade between our own and the old countries of Europe. The advanced state of the science of Horticulture there, gives them this advantage—they are constantly introducing and producing new plants, from all parts of the world, which we obtain from them. And it is to the interest of the nurseryman in this country to keep posted in regard to the discoveries and improvements of the age. To this end, this Hand Book is designed to furnish seedsmen, horticulturists, &c. with a review of each year's progress in a convenient form, and as a ready reference for those who have neither time, means, nor inclination to peruse the numerous publications necessary to obtain the desired information.

There is also a list of American and foreign nurserymen who trade with this country. We commend the hand book to the class for whom it is designed, as a useful reference.

[Written for the Valley Farmer.]

#### The Yellow Locust as a Shade Tree.

In the "Horticultural Notes," in the July number, a friend is slandered—the Yellow Locust is declared the meanest and most detestable shade tree for a door-yard, and the writer gives "four good reasons" for his belief, not one of which holds good in regard to our trees.

In our door-yard—and a beautiful door-yard for a farm-house it is—we have fruit and forest trees, all intermingled: Elm, Almond, Sycamore, Peach, Prickly Ash, Nectarine, Ailanthus, Pear, Silver Poplar, Cherry, Catalpa, Horse Chestnut, Plum, Post Oak, Black Jack, Apple, Locust and Evergreens, and second to no shade tree are our Locusts.

With the same care in shaping the tree that we bestow on others, we have not failed to have handsome-shaped trees. In the beauty of its foliage and flowers, it has few equals in the American forest. It diffuses around an agreeable fragrance. The shade is thicker than many highly puffed trees—than the Sycamore, Ailanthus, or Silver Poplar. The few suckers it puts up, except when the roots are cut or broken



by too close cultivation, are formidable to no one but a very lazy man. Ours are not eaten by borers—throws off some leaves, but not enough small branches to destroy any one's comfortable sitting, and in a dozen years the high winds have not torn from our trees one large branch. So Carew must make an exception to our trees.

We say plant the Locust: for beauty and shade, it has few superiors; it grows fast, while, as a dollar loving people, we can find comfort in the fact that its light, hard and durable timber will add to our wealth whenever it must give way to some fancy foreign humbug.

St. Louis County, Aug. 10th. A. R. J.

### STRAWBERRIES IN TENNESSEE.

EDS. VALLEY FARMER:—You requested me to give you my experience with strawberries this season. I send below all that I think valuable in my observations:

Wilson's Albany—Best bearer of thirty kinds; size large; color too dingy to be beautiful; quality third-rate: does not stand the heat of our summer well; will not supersede varieties of higher flavor. Desirable for market; and for private gardens, also, when one is satisfied with an inferior quality of fruit in consideration of the ease with which a crop is secured.

McAvoy's Superior—My best berry, all things considered. Larger than Wilson's Albany, and gives two-thirds as great a crop. Stands the summer's heat well; beautiful and delicious; said to be ill adapted to marketing; but I have sent it successfully to Chicago, 474 miles by rail.

Walker's Seedling—Of medium size; but exquisite flavor and great beauty. Crop one-third that of Wilson's Albany.

Victoria—Very large and of extraordinary beauty. Flavor excellent, equal to McAvoy's Superior. Bears about equally with Walker's Seedling.

McAvoy's Extra Red—An excellent bearer, hardy, and valuable. Quality unexceptionable under our warm suns.

Hovey's Seedling—Unproductive with me. Have made repeated trials without success, while other varieties, under the same treatment, have borne large crops. Am making an additional trial with plants direct from C. M. Hovey.

Peabody's New Heautbois—Worthless here. Scott's Seedling, Longworth's Prolific, Kne-vitt's Giant, Eliza Seedling, (from B. M. Watson), Triomphe de Gand, and Boyden's Mammoth are promising.

Marylandica does nothing yet, nor Duc de Brabant, nor Burr's New Pine. The last named suffered greatly in summer.

For family use I would recommend in this latitude, Wilson's Albany for those who find difficulty in securing a crop; for myself I would leave it out. Better sorts are McAvoy's Superior, for the main crop; Large Early Scarlet, for the earliest fruit; Victoria, for the most showy; and Walker's Seedling for the highest flavor.

For market, Wilson's Albany, McAvoy's Superior, McAvoy's Extra Red, and Large Early Scarlet.

Jackson, Tenn.

C. S. Dob.

[Written for the Valley Farmer.]

### GOOSEBERRIES.

Having traveled during the gooseberry season through several degrees of latitude up and down the Mississippi Valley, we were pleased to find an increased interest in the gooseberry as a reliable and productive garden fruit. Often where almost everything else failed, the gooseberry did well. Many are raising only the commonest kinds, and still reap much advantage from them. Far better is it to raise only the common wild gooseberry, than to raise none at all. Yet it is easy to get a single root of some improved kind and take good care of it, and in a few years, slips from that may be put out enough to supply any family. The gooseberry is a rapid grower and very tenacious of life.

If every farmer would put a good strong fence around a small piece of land and make it safe against all kinds of stock and fowls, and then put into it a good stock of small fruits and take fair care of it, he would soon have an annual supply for his family, which would be a luxury, a profit, and a benefit to health, as well as a very great source of pleasure. There is a great indifference to the small fruits among farmers. They seem to regard raising gooseberries, currants, raspberries, &c. as small business—a kind of child's play or woman's fancy. They expend their energies on corn and wheat. Very well, let the corn and wheat be raised. (We have too much of them now); but let us have a little choice small fruit to go with them. Corn is dry fodder when eaten alone; wheat is little better. Both are real luxuries with a good dish of fruit. Only a little land is required for the small fruits. It will require but little time to put it into a good state and plant it with several varieties of fruit. Apples and peaches often fail; but the small fruits seldom. Apples and peaches require considerable ground; the small fruits but little. Apples and peaches are long in maturing; the small fruits grow quick and bear early. Slips of gooseberries and currants will often bear the first year. It is only negligence that prevents every farmer's family from having a full supply of these home luxuries. We do not want to say that the farmers are lazy. That would not be true. Yet they often live for years without a gooseberry, currant or raspberry, when they have as fine land for them as the world affords. Why, just as an ornament, they will pay for the raising. How beautiful to see a yard fringed and crossed with rows of gooseberries and currants! Raspberries may be made almost equal to running roses for beauty. How easy to make the yard of the farm house a garden of small fruit. How easy to set gooseberries, at the corners of the house, along the walks, behind the kitchen, in many places where they will occupy but little room, and yet yield a rich supply of fruit.

Try it, farmers; try it, house-wives; try it, children; try it, everybody. \*

Now is the time to begin to prepare the ground for planting fruit trees. Better plant 100 trees well than 200 poorly. Don't be afraid to plant largely. Trees increase the value of the farm and pay a large profit.

[Written for the Valley Farmer.]

**CRANBERRY CULTURE.**

Much has been written upon this subject within a few years. In the Eastern States the cranberry still receives a good share of attention; but in the West, except in particular localities, it is hardly noticed. I have found many intelligent and enterprising farmers in Missouri who had land most admirably adapted to the cranberry and yet were not aware of the existence of any such a valuable and profitable fruit. The cranberry is found growing wild on the meadows and wet places in Michigan and other Western States. It is, when ripe, a small red fruit about the size of the common red cherry, the variety usually found on low ground being called from this resemblance the cherry cranberry. The vines run low and propagate similar to the strawberry. They will grow in any low, wet land, but it is essential that they be overflown during the winter and throughout the season of frost to ensure a good crop. Select a meadow as much sheltered on the North as possible. Plow and remove the surface sod. This, when well rotted, will make admirable dressing for the garden. Then cover the meadow with sand or fine gravel, two or three inches deep, and set the plants out in this a distance of two feet apart. Let the water on slowly till the surface is flowed, then keep it on till all danger of frost is over in the spring. The sand is useful in preventing the growth of weeds and grass which otherwise would crowd out the vines. If set two feet apart the vines will cover the ground in about two years. As soon as they once get possession of the soil there is no danger of intrusion from weeds or grass. The cranberry is a water plant and must have water; therefore upland cultivation is impracticable. In a few instances where grown on upland the soil was naturally moist, and the great extra labor required to keep down weeds made the culture unprofitable. The plants should be set out in October or November according to climate. The cherry variety is most hardy and fruitful. The profit of the cranberry is very great, exceeding all other fruits in this respect, when we consider the little care required. The product the first year is generally 6 to 10 bushels per acre; the second year from 30 to 40 bushels. On and after the third year, in full bearing, they yield from 100 to 200 bushels per acre. As many as 400 bushels have been produced per acre, and 300 is not an uncommon yield: 150 bushels may be put down as a low average. Captain Tucker, of Canton, Mass. in 1856, got 1,500 bushels from his meadow, which he sold to one firm at \$8.00 per barrel. Another gentleman received \$4,000 as the profits of fifteen acres in one year, without any cost of cultivation. The market is never glutted with this fruit. The demand increases with the supply, and the price is always high, never being less than \$4.00 per bushel. This is among the best, if not the finest, fruits for jellies, tarts, sauces, &c., and an excellent drink is made of it for fevers and throat and lung diseases, in which its effect is very beneficial. There are probably 10,000 acres of land in Missouri that

are peculiarly adapted to the cranberry, especially in the south-east portion, in Cape Girardeau and Stoddard counties. These lands are mostly underlaid by a stratum of sand of just the quality for surface covering, and which can be easily used for this purpose. The land is now in market, can be bought cheap and put in good condition at trifling cost. The *Osier* or *basket willow* can be grown upon the same land without extra expense; in fact, I found the cranberry in that climate to do better when in the shade, and I would earnestly recommend their joint cultivation as both beneficial to plants and doubly profitable. The frost is not so likely to injure the cranberry in that latitude, and the fruit ripening early commands a better price. I have seen it sold in St. Louis at \$6.00 per bushel. In Maryland and Virginia in the same latitude, the cranberry flourishes well and attains a superior size and flavor. I trust some enterprising men may be found to give it a fair trial in Missouri and make it equal with the grape in interest. Any nurseryman in the West will give information where the plants may be obtained. Sullivan Bates, of Bellingham, Mass. has the best vines for sale at \$3.00 per 1,000. The freight to St. Louis will be about \$1.00 per 1,000 on 10,000. Those ordering of him will be sure of good vines. J. H. S.

[Written for the Valley Farmer.]

**FRUIT.**

We rejoice in the growing appreciation of fruit as an article of product and consumption. We rejoice in knowing that thousands of orchards are being planted in all this great South-West, and that small fruits are already growing in thousands of gardens. And still only the beginning is made. The nurseries can now scarcely supply the demand, and still the call is for more. The fruit era is but just dawning. The fruit age of the world has yet to come. The culture of fruit is yet new. What the next hundred years may do in perfecting present kinds and producing new and improved kinds we can scarcely conjecture. See what twenty years have done with the strawberry. What will twenty more do? Is there any limit to the improvement of that delightful fruit? What may be done with the raspberry? Who can tell? It has but just taken its place in the garden, and yet promises to give more profit and pleasure than we can well calculate. When new and improved species shall be produced adapted to different soils and climates, may it not cheer every garden and enliven every table with its precious fruitage? And the blackberry—sable queen of berries! who can predict its career? It has but just come from the wildwood. It is a savage yet, with thorny qualities and habits; but its future is glorious. So of many other fruits. The grape already has an honored place; but who knows its future? New and much better species may be produced. But the best of all is that this fruit culture is administering to the health and happiness of the people; it is cultivating and elevating humanity; it is giving place to higher pleasures and nobler aims. It

is enriching the tables, pockets and minds of men. We fondly hope the love of fruit will take the place of the love of strong drink; that it will improve the appetites of the people and elevate their tastes and add much to the social and domestic life of men. No occupation is more delightful than fruit-raising. Women and children can work with delight and profit and with a great advantage to health, in the fruit garden. All around the house may grow the richest fruits, adorning and enriching both the outer and the inner home. The small fruits ought to be woman's pride and care. \*

### Meramec Horticultural Society.

The regular monthly meeting of this Society was held at Allenton, on Thursday, the 2d inst. An interesting letter was received from the Secretary of the Horticultural Society of Anna, Ill. stating, among other items of interest, that the grapes in bearing in that vicinity, the Isabella, the Catawba, and Concord were all badly affected with rot, except where the land was under-drained.

Dr. L. D. Morse stated, that two articles had recently appeared in the *Valley Farmer*, in relation to the importance of a Board of Agriculture for Missouri, one of them written by a gentleman of Illinois. Considerable interest had been excited on the subject in some quarters at least. In order to accomplish such an object, a definite movement must be commenced somewhere, and he therefore offered the following preamble and resolution:

"Whereas, the policy of aiding and encouraging agricultural progress and improvement by means of State appropriations, and the establishment of State Boards of Agriculture, has been adopted in most of the States of the Union—in many tested for a score of years—and has been found, without exception, to be in the highest degree judicious and profitable, therefore,

"Resolved, That a committee of three members of this Society be appointed to prepare a circular, calling attention to the importance of taking steps for the formation, at an early date, of a State Board of Agriculture, and for urging the passage of an act by the next legislature for the encouragement of Agriculture, and to send a copy to every Agricultural and Horticultural Society, and every newspaper in the State, requesting such action and co-operation as the importance of the subject demands."

After a brief discussion, the preamble and resolution were adopted without a dissenting vote, and the following committee appointed, viz:—Dr. L. D. Morse, Dr. A. W. McPherson, and Mr. T. R. Allen.

### FRUITS.

Among the fruits on exhibition were large and beautiful specimens of Crawford's Early or Melocoton Peaches, in fine eating condition, from Mr. C. Paffrath; also, German Prunes, equally fine in appearance, but not ripe. Samples of an excellent seedling apple were shown, raised by Mr. Wright, of this township. The obtaining of good seedling fruits, of all kinds, originating in our own soil and climate, being

considered of great importance, the Fruit Committee, made the following description of this apple, and proposed the name of "Wright's Sweet," which was adopted:

Size, medium; form, roundish, flattened at the ends; color, pale green, slightly yellowish in the sun, with numerous white dots; stem, medium, slender; basin, rather deep, regular, often russeted; cavity, medium; calyx, closed; core, small, open; seeds, small, pointed, light brown; flesh, greenish white, tender, juicy, aromatic, sweet; quality, very good; season, last of July.

[The regular discussion of the day then followed, viz: Wheat Culture—but as we have treated this subject very fully in the present number of the *Valley Farmer*, and as it would occasion repetition, and we are crowded for room, we do not publish the interesting remarks made upon the subject.—Eds. *Valley Farmer*.]

The subject adopted for the next meeting was "The comparative advantages of fall and spring planting of trees."

The President, with consent of the meeting, announced that in consequence of a special meeting of the State Fruit Growers' Association, to be held at Hermann, on the 7th and 8th of September, our next meeting would be held at the house of Wm. Harris, in Allenton, on Saturday, the first of September, at 10 o'clock, A. M.

MERAMEC.

[Written for the *Valley Farmer*.]

**RHUBARB.**—Rhubarb is almost to be reckoned as a fruit. It has many of the properties of a fruit, answers many of the purposes of a fruit, is as wholesome perhaps as a fruit.

The large and best kinds of rhubarb are especially valuable as a garden production for the following reasons:

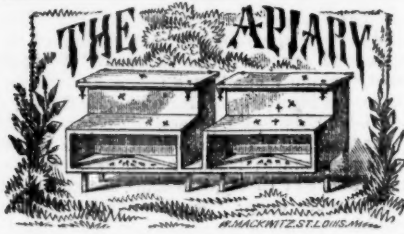
1st. It grows in a great variety of climate, and soil.

2nd. It is an energetic grower. It seems to feel that it is its business to grow, let the weather be what it will. Grow it will when anything will. And it will produce a heavier crop with the same labor than almost anything else. Whether for the kitchen or the market, it seems to be determined not to be beat. Frost cannot kill it. Drought cannot dry it. Water can scarcely drown it.

3d. It is an early production. It is the first summer sour, the first thing that can be used as a fruit. It grows long. It is a sort of whole season luxury.

4th. It requires little skill to raise it. Give it a rich soil and a fair culture and it resolves upon paying you well for your trouble.

5th. It is healthy. It seems to possess the very qualities of anti-biliousness so necessary in the early season in this Western climate. Every family should raise it and eat it freely. It should be canned or dried for winter use. It may be used the whole year round for sauce, pies, dumplings and the general uses of fruit. \*



[Written for the Valley Farmer.]

### HINTS FOR THE MONTH.

BY J. W. QUINBY.

I propose to give some directions in this article for straining honey and making beeswax. As remarked last month, honey intended to be strained should not be kept longer than is absolutely necessary, especially in warm weather. Comb-honey is very liable to be attacked by worms in the summer. It may be kept longer if the weather is cool, and if put in an ice-house it may be preserved almost any length of time.

If you strain honey for the purpose of feeding it to light stocks, much less care is requisite than when it is intended for the table. In such case the combs may be crushed, put in a large colander, and subjected to a high degree of heat. By this process the honey will flow more rapidly, and be more completely extracted than if no heat is applied. The disadvantages are, that the combs will be partially melted, and mingle the pollen or bee-bread which they contain with the pure honey. The melted wax will soon cool and can then be easily skimmed off, but the strong and disagreeable flavor of the bee-bread remains. This, however, is no objection so far as feeding it to the bees is concerned. For other purposes you may strain honey very conveniently as follows:

Make a wooden box three or four inches deep, and put on a bottom of wire-cloth, the meshes being about one-eighth of an inch square, making of the whole simply an oblong-square sieve. To hold this in an horizontal position, construct a frame and fix in it a broad gutter (easily made by warping a board), so arranged as to catch the honey as it drips from the sieve, and to convey it to some vessel placed to receive it. Having selected the combs to be strained, carefully remove all traces of dead brood, and worms, if there should chance to be any, mash with the hands, and place the dripping mass on the wire-cloth in the strainer. The greater part of the honey will soon drain off, and any particles of wax that may be carried with it, can be skimmed off after they have risen to the surface. By this process you will get a very pure article. Where much buckwheat honey is collected, it is sometimes desirable to strain it by itself, for the reason that the whiter product of the basswood, clover, and other plants, will command a higher price in market when not discolored by it.

Many inexperienced bee-keepers find difficulty in making beeswax. The following plan has been found to work well: First, reject all combs that are more than one-third full of bee-bread or foul brood, or that are mouldy or filthy. These should be buried; the remainder with all the refuse from straining, saved for wax. Take a strong bag or sack of coarse linen or grass-cloth—not large, not more than eight inches in diameter when full, and not over thirty inches long—crowd it full of comb, and put it into a kettle of boiling water. It is convenient to keep the mouth above the surface. When the contents are thoroughly melted, squeeze it between a pair of levers: these may be made with a joint like a pair of compasses. After forcing out all the wax possible, empty the residuum and repeat the process. Where large quantities are to be made, two or three bags may be used to advantage; one or two being heating while another is pressed.—

They must be strong and well made so as not to burst under pressure. When all the comb has passed through this process, let the fire go down, the water become still, and with a basin or some other vessel carefully dip the melted wax into pans or kettles. If great care is taken, it need not be re-melted for the purpose of purifying it, but it is often best to do so.

Persons who have but little comb may, if they choose, crowd it in a bag with some stones to sink it, put it in a kettle of water and boil it. By stirring it a little the whey will rise and can be dipped off.

It must be remembered that all comb designed for wax must be promptly made up, or subjected to sulphur fumes; otherwise, in the summer season, it will be consumed by worms in an incredibly short time. St. Johnsville, Sept. 1860.

[Written for the Valley Farmer.]

### MANAGEMENT OF BEES.

As the management of Honey Bees has been my business for the last twenty-two years; eleven years in the city of New York, and eleven years in Cincinnati, I thought it would not be amiss to give my own experience in the care of these industrious insects.

The first care of the apiarian, in spring, is to inspect his hives, lifting them from the stand, sweeping away all the dead bees, eggs of moths, scrapings of wax, moldiness, or other offensive matters that have accumulated during the winter, cleaning and drying the floor board effectually. The lower part of the combs, when a hive is setting out exposed to the weather, and when the population is scanty, is sometimes found to be moldy; it will save the workers some trouble, and contribute to their health to cut these parts away.

In the months of March and April, unless when the season is stormy, the bees will be observed venturing cautiously to the mouth of the hive, and if the sun shines out about mid-day, the little eager foragers will be seen spreading their wings joyfully, launching forth into the air, though with a low, timid flight, and roaming from bush to bush in search of some plant that may yield a modicum of pollen, for the queen has already begun to lay the eggs of workers, and although there is always a certain quantity of this kind of food in the hive, the product of the preceding year's gathering, for the coming brood, the provident insects are aware that an additional supply will be required, and rouse themselves accordingly from the Winter's inactivity.

The collection of farina, however, is, at this early period, very, scanty, although I have seen hundreds of bees fetching in pollen in the month of February; and the owner can help them by putting within their reach unbolted rye flour. In other respects, however, equally important, he has it in his power to minister essentially to their welfare, by supplying them plentifully with honey, or syrup or sugar. For even the well provisioned, a little additional supply would be welcome and prove advantageous, infusing fresh spirits into the hard working laborers, encouraging the laying of eggs by the queen, and consequently contributing greatly to the rapid increase of the population, and to the production of early swarms. We need not fear being over liberal, the bees are excellent economists, and will carefully husband what we entrust to them.

As the consumption of food in spring is very great, in consequence of the prodigious quantity of broods reared, the queen laying at the rate of one to two hundred eggs daily, the cultivator must see that there is an abundant supply, and commence feeding, if there is anything like a deficiency.

The food given to bees, in autumn, may be either honey or sugar, but in spring it should always be honey, as sugar does not form so good an ingredient of the jelly which nourishes the young brood.

No branch of bee management requires more attention than the feeding operation, and very many hives,



we fear, are irretrievably injured by the injudicious manner in which supplies of food are ministered. Given in a cold state, or in a state of fermentation, or at improper periods, cost every year the lives of thousands of bees. A simple mode of feeding is, by means of a small drawer, dug out of one and a half inch plank, about one inch deep, with a float, perforated with many holes, that should be laid over the whole of the honey in the feeder, so as to prevent any of the bees from drowning, and, at the same time, this float should be so thin as to enable them to reach the honey. It should be made so small that it will settle down as fast as the honey is removed by the bees. I also have eight holes through this feeder, to correspond with eight holes in the top of my hive, by which the bees pass up into the feeder, and back into the hive, with a box over it, and the top of the hive shuts over the whole. Here, then, you have a feeder, containing the prepared sweet, and without admitting the cold, or the robbers to annoy the bees. The heat of the hive follows the bees into the feeding apartment, which soon becomes of equal temperature with the hive. One convenience that attends feeding with such a drawer, is the exclusion of strange bees, as the sole communication with the interior is from the top of the hive. Bees fed in this manner fill up their empty cells, and when the flowers appear, we get the purest honey stored in the boxes for market.

EDWARD TOWNLEY.

CINCINNATI, March 14th, 1860.

## Domestic Department.

### Interesting to Farmers' Wives.

As a general rule, it is most economical to buy the best articles. The price is, of course always a little higher; but good articles always spend best. It is a sacrifice of money to buy poor flour, meat, sugar, molasses, cheese, butter, lard, &c. to say nothing of the injurious effect upon the health.

Of West India sugar and molasses, the Santa Cruz and Porto Rico are considered the best. The Havana is seldom clean. White Sugar from Brazil is very good. Refined sugars usually contain most of the saccharine substance, therefore there is probably more economy in using crushed, loaf, and granulated sugars, than we should at first suppose.

Butter that is made in September and October is best for winter use.

Lard should be hard and white: and that which is taken from a hog over a year old is the best.

Rich cheese feels soft under the pressure of the fingers. That which is very strong is neither good nor healthy. To keep one that is cut, tie it up in a bag that will not admit flies, and hang it in a cool, dry place. If mold appears on it, wipe it off with a dry cloth.

The best rice is large, and has a clear, fresh look. Old rice sometimes has little black insects inside the kernels.

The small white sago, called pearl sago, is the best. The large, brown kind has an earthy taste. These articles, and ground rice, tapioca, &c. should be kept covered.

The cracked cocoa is the best; but that which is put up in pound papers is often very good.

Shells are apt to be musty. Try a quarter of a pound before buying a quantity.

To select nutmegs prick them with a pin; if they are good the oil will instantly spread around the puncture.

Keep coffee by itself, as its odor affects other articles.

Keep tea in a close chest or cannister.

Oranges and lemons keep best wrapped close in soft paper, and laid in a drawer of linen.

When a cask of molasses is bought, draw off a few

quarts, else the fermentation produced by moving will burst the cask.

Bread and cakes should be kept in a tin box or stone jar.

Salt codfish should be kept in a dry place, where the odor of it will not affect the house. The best kind is that which is called Dun, from its peculiar color.—Fish skin, for clearing coffee, should be washed, dried, cut small and kept in a box or paper bag.

Soft soap should be kept in a dry place in the cellar, and should not be used till three months old.

Bar soap should be cut into pieces of a convenient size, and left where it will become dry. It is well to keep it several weeks before using, as it spends fast when it is new.

Cranberries will keep all winter in a firkin of water in the cellar.

Potatoes should be put into the cellar as soon as they are dug. Lying exposed in the sun turns them green, and makes them watery. Some good housekeepers have sods laid over barrels of potatoes not in immediate use. To prevent them from sprouting in the spring turn them out on the cellar bottom.

To thaw frozen potatoes, put them in hot water.—To thaw frozen apples put them in cold water. Neither will keep well after being frozen.—[Housekeepers' Friend.]

**PICNIC SAUCE.**—Beat the yolks of four eggs perfectly. Mix in the eggs a tumbler of jelly; four large tablespoonsful of brown sugar; four large tablespoonsful of mustard mixed into a batter with vinegar: to these ingredients add a teaspoon of butter, and two tumblers of best vinegar. Stir all together well. Set the vessel in which you have mixed the sauce in a pot of boiling water and cook until it thickens and the egg is done. Stir in a little salt, and a half teaspoonful of cayenne pepper.

**TOMATO SAUCE.**—1 peck of tomatoes; 1 ounce cloves; 1 ounce cinnamon; 1 quart vinegar; 4 pounds brown sugar; 2 tablespoons of salt, and the same of ground black pepper. Peel the tomatoes and boil until very tender. Drain them from the juice. Now boil the sugar, spices, &c. in the liquid until it is thick as syrup; return the fruit into this syrup, and stew until the mass is a jam. Keeps well any length of time.

**TO GET RID OF MOSQUITOES IN THE NIGHT.**—Mosquitoes, says somebody, love beef blood better than they do any that flows in the veins of human kind.—Just put a couple of generous pieces on plates, near your bed at night, and you will sleep untroubled by these pests. In the morning you will find them full and stupid with beef blood, and the meat sucked as dry as a cork.

**CURRANT VINEGAR.**—Last year, for trial, I took fourteen pounds of currants, mashed them as for wine, put them into a tub, and put two or three pails of water to them. Then let it stand several days, stirring it two or three times a day. After standing so several days, I strained or pressed it, and with molasses enough to make it as sweet as new cider, I had ten gallons. I put it into a keg, and did not open it till December, when I found it to be as good vinegar as was ever made.—[Country Gentleman.]

**TO PRESERVE SMALL FRUITS WITHOUT COOKING.**—Strawberries, raspberries, blackberries, cherries and peaches can be preserved in this manner:—Lay the ripe fruit in broad dishes, and sprinkle over it the same quantity of sugar used in cooking it. Set it in the sun or a moderately heated oven, until the juice forms a thick syrup with the sugar. Pack the fruit in tumblers, and pour the syrup over it. Paste writing paper over the glasses, and set them in a cool, dry place. Peaches must be pared and split, and cherries stoned. Preserved in this manner, the fruit retains much more of its natural flavor and healthfulness than when cooked.



### METEORS.

#### THE GREAT METEOR OF JULY TWENTIETH.

On a former occasion some of our young friends requested us to give them an occasional chapter on Astronomy. We accordingly commenced a series of numbers on that subject which were continued for some months in the *Valley Farmer*, but from some cause the subject went from our minds and they were discontinued. The passage of a brilliant meteor over a wide extent of country, and witnessed by a great number of persons on the night of the 20th of July last, has excited an unusual degree of interest, inasmuch as it afforded an extraordinary opportunity for observation, and although the subject does not relate directly to *matters of the farm*, yet a few remarks from us may prove interesting to many of our young readers.

This wonderful body was seen about half-past nine o'clock on the evening of the date above given, over an extent of country nearly 1,000 miles from West to East, and over a width of country nearly 500 miles. It was first seen in the western horizon, passing eastward, and continuing its course over an island of the sea, where we now write, to the ocean, where it either fell, or continued in its orbit through infinite space; but as it burst asunder into two or three parts when last seen from the land it is probable that, like many others, it fell and sank into the sea. It was seen in Ohio, Pennsylvania, Virginia, New York and all the neighboring States towards the Atlantic. Sufficient time has not yet elapsed to make complete calculations from the reports of the various observers in regard to its size, height, velocity, &c., yet from the most reliable data now at hand, it occupied about thirty seconds in its passage across our horizon, at a probable height of thirty-five miles. Its velocity was very great; traveling with the earth it outrun it in its course at the rate of twenty miles a second, at which speed it would pass the entire circuit of our globe in less than one hour. It shone with a brilliant light,

leaving numerous scintillations in its wake, and when it burst, the parts were of various colors resembling a display of artificial fireworks. Its diameter is supposed to be about one-fourth of a mile.

Similar meteors have been of frequent occurrence. The most remarkable, in some respects, was that which exploded and fell in numerous pieces on the 1st day of May, 1860, near New Concord, Muskingum county, Ohio. A considerable number of the pieces of this body were seen to fall to the earth at the time of the explosion, and the pieces, some of which were buried in their fall two feet and upwards, were dug up, and weigh from a few ounces to upwards of a hundred pounds. These, like all similar bodies, when they fall seem to acquire intense heat, so much so that the outer surface of each piece is rounded or partially smoothed by fusion or melting. Several of these pieces still retained a great degree of heat when they were taken from the earth.

On the 28th of March, 1859, a meteor burst and fell in a great number of fragments, in Harrison county, Indiana. Prof. J. Lawrence Smith, of Louisville, has examined parts of both these two last bodies and found them to be identical in composition. Various theories are entertained in regard to the origin of these mysterious bodies, but as yet nothing is known, beyond mere conjecture. Meteoric stones are of two kinds—one is composed of nearly pure iron with a small mixture of nickel and other metals. Others are chiefly a kind of grey stone containing small nodules of pure nickel, iron and other metals in *mechanical* union. Analysis shows the composition of these meteorites to differ from any minerals found in our earth; that is, the metals of which they are composed is in a purer state and their combinations differing from any similar matter of terrestrial origin, and hence they must have proceeded from the regions beyond the earth. Professor Smith is of the opinion that they are of lunar origin and were projected from the moon by volcanic power in long distant periods and have ever since been revolving in orbits, and having crossed the earth's track and got within its gravitating influence have fallen. Some suppose they may have been formed in the atmosphere; others claim that they are fragments of an exploded planet that once revolved between the orbit of Mars and Jupiter, and this conclusion is favored by the fact that upwards of fifty small planetary bodies have been discovered revolving between these two planets since the commencement of

the present century, and all but four of them have been discovered within the last few years. These small bodies or asteroids move in orbits extremely elliptical and more irregular than any others in our solar system, and hence it is *possible* that the materials of which we are speaking may have been parts of the bodies that constitute them. The cause of their intense heat and brilliant light is supposed to be produced by contact with the earth's atmosphere, and the immense velocity with which they pass through it, and as they approach near the earth the more dense is the atmosphere, and the greater the heat, which cause them to throw off particles, with brilliant scintillations in their passage, like the one of the 20th of July, and finally entirely explode and fall. Another fact that strongly favors the idea that they revolve in orbits, is, that all the pieces that have been known to fall to the earth do not fall vertical (which they would if propelled only by the attractive power of the earth), but they descend in very oblique lines, partly in their orbital course, and slightly deviating with the attraction of gravitation.

The largest of these meteorites that has ever come under our personal observation is in Yale College. It fell a few years since in Texas, and weighs 1,800. Professor Smith has one that weighs nearly 200 pounds. These are of the kind that partakes of nearly pure iron. Prof. S. has also many smaller specimens of both kinds, including several of the pieces that fell in Indiana and Ohio recently.

We should be glad to extend our remarks upon this interesting topic, and also to allude to other meteors that have appeared in various parts of the earth did space and circumstances permit.

[Written for the Valley Farmer.]

### FAMILY TROUBLES.

Was ever there a family without its troubles? Adam and Eve had their troubles in Eden; and all families have had their troubles. Every family has a skeleton behind the door; every person, a thorn in his side. It is said that misery loves company, so take courage hapless man, wearied woman. You are in the majority. "Man is born to trouble as the sparks fly upward." A useless family would yours be if it knew no trouble. Trouble is our great teacher. It nerves us with strength; it gives us courage; it tempers our mettle; it develops our self-control; it quickens our inventive powers. Troubles are to us what the winds are to the oak, what labor is to muscle, what study is to mind. Life is a school, and trouble is one of its great lessons. Troubles are not to be coured, but when they come we must get

over them the best way we can, or bear them with the best fortitude we can arouse. Take courage, therefore, troubled one. Not in vain are your trials. They make you brave, strong; and, it is to be hoped, better. Be not cast down, cheer up: cast aside your weeds and woes. Look the world in the face; do your duty; take every trouble by the horns, overcome it with the courage of a true soldier in life's great campaign, and stoutly contend for the victory of will and wisdom. Troubles are the rounds in the ladder of life by which we go up to the highest summits of mortal excellence. \*

### PHILOSOPHY OF BATHING.

The following is from Dr. Mayo G. Smith on this subject, and is worthy of consideration.

There are in the human body 2,700,000 glands and 7,000,000 pores, from 2,000 to 3,000 to the square inch, and one-eighth of an inch in depth, making twenty-eight miles of human drainage.

Five-eighths of all that is eaten passes off through these pores, and but one per cent. of all perspirable matter consists of solid substances. The change in the muscles, tissues and bones occurs in from one to three years, and in the entire body, in from six to seven years. If this old matter be retained, it causes disease—it is a real virus.

Some diseases are relieved almost instantly by opening the pores. Diarrhœa is frequently cured; matter from the mucus membrane is expelled through the skin; tobacco, opium and mercury have been thus exuded. Whatever through the skin the body can expel, it can absorb. Hold the end of your finger in spirits of turpentine; it is absorbed, goes through the system, and may be detected by its odor. Constant handling of arsenic has produced death by absorption.

The doctor relates an account of a gentleman in Barbadoes, who was in the habit of daily intoxication, and had constructed a tub, with a pillow to accommodate his head, and when in this state was placed therein, and the tub was filled with cold water, in which he reposed for two or three hours, and would then arise refreshed and invigorated. When his wife or family required him, they would wake him up by taking out the plug and allow the water to escape when he would pleasantly complain of the "loss of his bed-clothes."

Dr. Brock, a student of Sir Astley Cooper, once poisoned a dog, which immediately plunged into a neighboring river and remained for some time with his body almost entirely submerged, after which he left his watery hospital and ran home cured. Dogs have been repeatedly cured of hydrophobia, by holding them in water.

Thirst has been often relieved by immersion, even in salt water, the salt, probably, being excluded during the process of transudation. Mutton bones, boiled a long time in soft water, with a slight addition of calcined potash, made fresh every day, have imparted to the water such nourishing properties that the patient bathing therein daily, and taking nothing save a few teaspoonfuls of tea twice a-day, and one table-

spoonful of tonic syrup, gained 15½ pounds in as many weeks, simply by absorption.

Perspiration is eliminated from all parts of the body, and the excretions, cutaneously forced, may from some parts of the surface be re-admitted to the circulation, and if poisonous or injurious, whenever the blood visits it, it must carry disease. Nature keeps her side of the interior clean and soft, and demands an unobstructed exterior, and exudes to the surface the refuse matter for removal by bathing and evaporation. A dry, light powder, mixed with sweat and oil from the glands, and dust, clogs up the pores. As all parts of the cuticle have pores, as well as the face and arms, all the body should be bathed at least one-third as many times as those are.

On board a slave ship the small pox suddenly broke out. Medical aid was powerless. Every morning the dead in great numbers were thrown overboard. In the midst of terror and anguish, the negroes cried out, "Let us do as we do in our own country with the sick," and, permission being given, they gently lowered their sick companions into the sea, letting them remain a few minutes, and then raised them, and placed them in the sunlight on deck until dried, and repeated the process several times, when the disease left them, and they were cured.

At Charleston, S. C. during the recent epidemic, among several northern mechanics who had gone thither in company, but one escaped the prevailing fever, and he alone bathed frequently, and never slept at night in any of the clothes worn by day. The others cast off only the outer garments, slept in their perspiration, and died.

Cold water is used and prescribed much more than formerly, though many would think a physician not worth sending for who should prescribe so simple a remedy. Abernethy's advice to one of his wealthy patients was, "Let your servant bring to you three or four pailsful of water and put it into a wash-tub; take off your clothes, get into it, and from head to foot rub yourself with it, and you'll recover." "This advice of yours seems very much like telling me to wash myself," said the patient. "Well," said Abernethy, "it is open to that objection."

Dr. Currie used fresh water generally, and by long and careful experience, he found that bathing prevented or cured most diseases.

#### THE GARDEN, FARM AND DAIRY.

The noblest men I know on earth,  
Are men whose hands are brown with toil;  
Who, backed by no ancestral graves,  
Hew down the woods and till the soil,  
And win thereby a prouder fame  
Than follows king or warrior's name.

The working men, whate'er their task,  
To carve the stone or bear the hod—  
They wear upon their honest brows  
The royal stamp and seal of God!  
And brighter are their drops of sweat  
Than diamonds in a coronet!

God bless the noble working men,  
Who rear the cities of the plain,  
Who dig the mines and build the ships  
And drive the commerce of the main;  
God bless them, for their swarthy hands  
Have wrought the glory of our lands.

#### Agriculture and Horticulture.

BY MRS. L. H. SIGOURNEY.

They leave no sting in the heart of Memory—no  
stain on the wing of time.—[Hon. M. P. Wilder.

Brown Ceres, one day with Pomona was meeting,  
'Neath Autumn's spirited smile;  
So giving each other a sisterly greeting,  
They sat down to gossip awhile.

"I hope you're quite well, dear, this elegant weather.  
"How charming the country," they said.  
"And how do you prosper (both speaking together),  
"With regard to your business and trade?

"Look where the rude thorn bush and bramble were  
springing,  
"With fruitage the apple tree bends;  
"The scythe of the Mower at sunrise is swinging,  
"And the song of the Reaper ascends.

"Let us walk hand in hand, for no obstacle caring,  
"Till vines o'er the mountains shall grow,  
"Its suit of green velvet, the brown heath be wearing,  
"And deserts with plenty o'erflow.

"The gold in its mine, with excitement and wonder,  
"May summon an emigrant band,  
"And the chariot of Mars trample on in its thunder—  
"But we're the true strength of the land.

"For us no lorn wife in her cottage is grieving;  
"Earth welcomes us both in her prime.  
"No sting in the bosom of Memory we're leaving,  
"No stain on the pinion of Time."

[Written for the Valley Farmer.]

#### HARD TIMES.

Hard times it is to be hoped are doing up their perfect work. Three good years of real tough times ought to have given us some good ideas of economy, industry, energy and perseverance. They ought to have taught us to haul in our horns of pride, to take down our sails of vanity, to circumscribe our wants to our actual needs, to be content with small gains, to make the most of our opportunities, and to use our means in the most successful manner. The times have taught these useful lessons in thousands of families. Many farmers have put their farms to better service than ever before, have sowed and planted more, have tilled better, have used more care, industry and skill in the conduct of their farms. Many land speculators have been compelled to put their lands under cultivation and so turn them to their country's good as well as their own. Many idlers have been forced to go to work; many drones to earn their own living; many gamblers in stocks and trades to go about some legitimate business; many households to reduce their needless expenses to a more temperate and consistent mode of living.

On the whole it is clear the hard times will do much good. At present they seem to be easing up a little. The fair promise for the year's crops is encouraging the whole country and it is to be hoped that we shall come out of this trying ordeal chastened and strengthened in good resolutions for the future.



## Editor's Table.

### Prepare for 1861! The Campaign Opened.

The increase in our subscription list for the present year, has been more than double that it has ever been for a single year before. This has encouraged us to make still greater efforts for 1861. It is only by continued effort that we can enlarge our list of subscribers. It is only by repeated acts of kindness on the part of our subscribers, by recommending the VALLEY FARMER to those who do not patronize it, that we can hope to enlarge our circle of readers. For what our kind friends have done in our behalf heretofore, we desire to return our most grateful thanks. It is all that we have to give them. Another year is approaching, and we again solicit their kind services in extending the influence of our Journal. The season of our Fairs is at hand, when the Farmers and Planters will be present, and they only need to have the matter properly laid before them to become subscribers to our periodical. Every reader can testify to its practical value.—Our friends can secure hundreds of subscribers at the Fairs with a little effort. Let them take a copy of the paper with them, with a blank book to enrol the names, and scores of subscribers can be obtained.

We shall offer a larger list of Premiums for Subscribers this year than ever before, and all names sent in hereafter will compete for these Premiums. The Premiums will be splendid and be worth striving for.

Another new feature will be this; that one NEW Subscriber will count as much as two old ones. The object of this is to make it more equal all around, so that where there are already large lists, they shall not have an advantage over other places.

Again, another object we have is to get new subscribers, as we thereby are increasing our list.

Our Premiums will be delivered hereafter on the First of March, so that they may be used during the Spring season.

Now, friends, go to work in good earnest—if not for the Premiums, to encourage a good Agricultural Journal. Subscriptions can commence at any time. Agents can receive subscriptions at our lowest club rates, viz., 80 cents a year. Thousands of new names could be procured for our paper at the Fairs with a little effort. Who will not make it?

**ADDRESSES AT FAIRS.**—The St. Louis Editor acknowledges the receipt of a large number of polite and pressing invitations to deliver addresses at the coming Fairs; but such are his engagements that he cannot certainly accept any of them; though it would give him great pleasure to accept them all. He therefore hopes that other speakers may be chosen. If he can be present at any of the Exhibitions, he will, if it be desired, give the people a short talk. He hopes that practical, intelligent farmers may be generally selected to speak. An address on agriculture from a good enterprising farmer, is worth a score of addresses from lawyers and politicians; and there are thousands of farmers capable of delivering them, if they are only mustered into the service.

**THE SEVERE DROUGHT.**—For many years, and probably never, has Missouri suffered from such a severe drought as has existed the present season. There was but little rain last winter, and none in many parts of the State during Spring, and scarcely a shower has been seen during the summer. In many parts of the State there will be no crops raised; in other parts one-third of a crop, and in some parts half a crop. The Western portions of the State have suffered most.—There has quite a severe drought prevailed in the Eastern portion, but most of the crops are fair. In Kansas the drought has been worse than in Missouri; and in Arkansas, Tennessee, and indeed nearly the whole South, the same terrible drought has prevailed.

It behooves farmers and planters to carefully husband all their fodder for their stock this winter. Let the corn be cut up, where there is any, early, as soon as the kernel hardens and before frost, and put it up in well made shocks, that the winds will not blow over nor the rains penetrate. Let the shocks be tightly and securely bound, and they will be found of great value in feeding all kinds of stock. Don't put off cutting up the corn till after the frost has come and destroyed the best parts of it. By all means cut it early and you will retain the rich juices in the stalks and leaves. Then, if you will get some good Corn Stalk Cutter, and cut up your stalks, and mix with them a little wet meal or bran or shorts, the stalks will be eaten up clean, and there will not be the waste that there is when they are scattered about the yard or field. If the corn stalks in the West were cut up early, and carefully shocked, and cut up with good stalk cutters, and fed out properly, more than treble the amount of stock could be kept, and in better order, than by the present wasteful system.

Also put up sheds or stables to protect the stock from the inclement weather. They will keep in better order on half the amount of food, when sheltered, than when exposed to the storms and vicissitudes of our climate. Now is the time to prepare for the comfort of your stock. Be merciful to them. See that they have good shelter and are well fed.

**THE GRAPE.**—The culture of the grape is attracting unusual attention. Three new treatises and essays have recently appeared. A small volume recommending a new system of training, called the "Single Stem, Dwarf, and Renewal System," is by William Bright, of Philadelphia. We have not seen Mr. Bright's work, and consequently we are not prepared to express an opinion upon the merits of the new system, but have read several notices of it, some of which speak of it in favorable terms. It is published by Messrs. C. M. Saxton, Barker & Co. New York.

A Premium Essay on the Culture of the Grape, by Mr. William Saunders, of Germantown, Pa. has appeared in the "Farmer and Gardener," published in Philadelphia, and another on the same subject, by Mr. J. M. McMinn. With an extensive Catalogue of new and improved varieties of the hardy grapes, and with ample directions for their culture, there seems to be nothing in the way of our becoming the most extensive grape growing nation in the world.

**CULTURE OF BARLEY.**—Barley is becoming one of the most profitable grain crops in all those sections near large cities where the land is adapted to its growth. The wonderfully increasing consumption of malt liquors, not only by the population of foreign birth, but by those of our own country, creates a ready market for all the barley that is grown.


Barley requires a rich, warm, mellow soil, which should be well prepared to insure a good yield. In the Northern and New England States, barley is usually sown in the Spring, but in the South and West, that which is sown in the Fall generally affords the greatest product. Land that has just yielded a crop of oats admits of fitter preparation for barley than that from which wheat has been taken. If the season has been favorable as it regards moisture, the beginning of September is the most favorable time to sow barley; but it is better to defer the time of seeding to a later period, if the ground is not sufficiently wet to admit of good preparation and a speedy germination of the seed.

The question has frequently been asked us whether there is any difference between the kind of barley that is sown in the Spring and that sown in the Fall. Botanically they are the same; but when sown in mild climates in the Fall, it becomes what is there termed winter barley. In Europe there is a four rowed variety of barley, which is strictly a winter barley, but it is seldom grown in this country. The quantity of seed sown per acre differs with different farmers.—We prefer two and a half bushels, believing that a larger crop will be realized from that quantity than when less is sown.

**THE AMERICAN JOURNAL OF SCIENCE AND ARTS.**—We are in receipt of the July number of this excellent journal. The present number, like the previous ones, contains a Review of Darwin's work, "On the Origin of Species by Means of Natural Selection, or the Preservation of Favored Races in the Struggle for Life. By Theophilus Parsons, Professor in Harvard University, Cambridge, Mass." This, and the Notes of Dr. Hooker and Prof. Gray, in previous numbers on the same subject, we have read with unusual interest. It also contains an account and notices of the fall of Meteoric Stones, at New Concord, Ohio, May 1st, 1860, by Prof. E. B. Andrews, Dr. J. Lawrence Smith, of Louisville, Ky. and others; as well as several other articles of exceeding interest on various subjects. There is no similar work that is conducted with a greater amount of talent in the United States or in the world. It has been published more than a third of a century, and with our present population, a circulation of less than one hundred thousand copies in the United States would not be creditable to the intelligence and scientific attainments of our people.

Published by Professors Silliman & Dana, New Haven, Conn. on the first of every second month, at \$5.00 a year.

**THE CLIP OF WOOL IN OHIO, IN 1860.**—The aggregate of the present shearing in Ohio, is estimated at 9,000,000 pounds, giving a revenue of more than \$4,000,000, at prices that are equal to the average of last year.

 **The Exhibition of the United States Agricultural Society,** has been fixed for September 12th to the 20th, and to be held at Cincinnati, Ohio. The Premium List amounts to \$20,000. On account of the prevalence of the Pleuro-Pneumonia among neat cattle, none will be allowed on exhibition; but large premiums will be offered for horses, machinery, steam fire engines, &c.

**AGRICULTURAL LECTURES AT YALE COLLEGE.**—Messrs. C. M. Saxton, Barker & Co. New York, have published the outlines of the course of lectures delivered at Yale College in Feb. last by a large number of the most distinguished and practical Agriculturists and Horticulturists in the country. The work has been prepared by Henry S. Olcott of New York, and embraces near 200 pages. For sale at the Agricultural bookstores.

**WHO WILL HELP THE FARMER?**—In our last month's issue we proposed a discount of fifty per cent. to all new subscribers after the first of July; that is, that we would send them the twelve numbers of the present volume for fifty cents. Now, who will take it? or, rather, who will not? If our present subscribers will carry the proposition to their neighbors; if each will canvass his neighborhood, and urge the merits of our Journal—its actual worth to the farmer—upon all in his vicinity, our list would be doubled. Politicians support their papers, often at great expense. So do other classes. Why not the farmers? How often might a good farmer order a copy to a neighbor who knows not yet the value of such a journal to him. Shall we not have the hearty help of all our present subscribers to increase our list of readers?

**CROPS IN CALLAWAY COUNTY, MO.**—Wheat: not half so much made as was sown last fall.

Oats: very short, too short to save with reaper; farmers have to resort to the old way of cutting with scythe and cradle. The crop will be a little over half an average.

Hay: nearly a total failure.

Tobacco: looks well, though late: not a large crop planted on account of scarcity of plants.

Corn crops very promising, more so than has been for many years; the quantity of ground planted very large; wheat land planted to corn, in addition to what farmers intended to plant.

Fruit: very scarce, next to none; the late frosts having destroyed nearly the whole crop of apples and peaches. Vegetables abundant and look fine.

W. J. J.

COLUMBUS, Johnson Co. Mo., July 27, 1860.

**Eds. Valley Farmer:**—The prospects of the farmers in this county are very discouraging indeed, the drought continues up to this time, parching and killing nearly everything green. Grass on the Prairie is dry, and very scarce at that; stock not improving any scarcely, and further West, I am told, it is worse. I do not think it possible for us here to make more than half a crop of corn, and not half a crop of Irish potatoes.

S. WHITSETT.

**THE MASSACHUSETTS CATTLE DISEASE.**—The special committee of physicians, appointed by the Agricultural Bureau of the Patent Office, to investigate the Cattle Disease, have made a report, in which they state that the disease is very much like cholera, and at present hard to check.

## FAIRS.

## STATE FAIRS FOR 1860.

National Horse Show,	Springfield, Mass.	Sept. 4-7.
Illinois,	Jacksonville,	" 10-14.
Vermont,	Burlington,	" 11-14.
Pomological Society,	Philadelphia,	" 11-14.
Kentucky,	Bowling Green,	" 18-22.
Nebraska,	Omaha,	" 19-21.
Pennsylvania,	Wyoming,	" 22-25.
St. Louis,	St. Louis,	" 24-27.
Wisconsin,	Madison,	" 24-27.
Maine,		" 25-26.
Ohio,	Dayton,	" 25-28.
United States,	Cincinnati,	"
Upper Canada,	Hamilton,	"
Iowa,	Iowa City,	Oct. 1-
New York,	Elmira,	" 2-
Oregon,		" 9-
Indiana,	Indianapolis,	" 15-20
Georgia,	Augusta,	" 22-27
Alabama,		Oct. 29 to Nov. 2.

## FAIRS IN MISSOURI FOR 1860.

Platte County,	Platte City,	Sept. 25-30.
Newark "	Newark,	" 3-7.
Lafayette County,	Lexington,	Oct. 2-6.
Central District,	Boonville,	" 1-5.
S. E. District,	Cape Girardeau,	Oct. 11, 12, 13.
Howard County,	Fayette,	Aug 29 to Sep. 1.
Osage County,	Linn,	Oct. 4th and 5th.
Jackson County,	Independence,	Sept. 4-9.
Benton County,		" 25-27.
Saline County,	Miami,	" 4-8.
Bates County,		Oct. 17-20.
Cass County,	Pleasant Hill,	Sept. 26-29.
Clinton "	Plattsburg,	" 11-14.
Tipton "	Tipton,	Oct. 8-13.
Polk "	Bolivar,	Oct. 2-5.
Vernon "	Nevada City,	Oct. 2-5.
Ray "	Richmond,	Sept. 18-23.
Franklin County,	Union,	Oct. 11-13.
Marion "	Palmyra,	Sept. 17-23.
Holt "	Forest City,	Oct. 2-4.
Boone "	Columbia,	Sept. 24-27.
Clay "	Liberty,	Oct. 2-7.
Gasconade "	Hermann,	Sept. 5 and 6.

## ILLINOIS FAIRS FOR 1860.

Adams County,	Quincy,	Oct. 2-6.
Carroll	Mt. Carroll,	Sept. 17-19.
Champaign,	Urbana,	Sept.
Cass,	Virginia,	Sept. 4-7.
Dupage,	Wheaton,	Sept. 26-28.
Hancock,	Carthage,	Sept. 19-21.
Henry,	Cambridge,	Oct. 3-5.
Jo Daviess,	Galena,	Sept. 11-14.
Knox,	Knoxville,	Sept. 25-28.
Kane,	Geneva,	
Lee,	Dixon,	Oct. 1-5.
Lake,	Liberty,	Oct. 2-3.
La Salle,	Ottawa,	Sept. 25-28.
Livingston,	Pontiac,	Sept. 18-20.
Monroe,	Waterloo,	Oct. 16-18.
Macoupin,	Carlinville,	Oct. 2-5.
Mason,	Decatur,	Oct. 1-5.
Ogle,	Oregon,	Sept. 25-28.
Pike,	Pittsfield,	Oct. 2-4.
Rock Island,	Rock Island,	Sept. 19-21.
Scott,	Winchester,	Oct. 2-4.
Tazewell,	Tremont,	Sept. 26-28.

## KENTUCKY FAIRS FOR 1860.

Bourbon County,	Paris,	Sept. 4-7.
Clark "	Winchester,	Aug. 21-23.
Harrison "	Cynthiana,	Sept. 18-21.
Logan "	Russellville,	Sept. 11-14.
North Kentucky,	Maysville,	Sept. 11-14.
Springfield Union,	Springfield,	Oct. 9-12.
Union County,	Eminence,	Sept. 25-28.
Mason and Bracken,	Germantown,	Sept. 25-28.
Owen County,	New Liberty,	Oct. 2-6.
Salvisa "	Salvisa,	Oct. 2-5.
Shelby "	Shelbyville,	Aug. 28-31.

**ST. LOUIS FAIR.**—This monster Exhibition will commence on the 24th inst., and continue one week.—The extent and popularity of this Exhibition are now so well known that it is unnecessary to make more than a mere announcement of the time when it will be held to induce all our enterprising farmers who can leave home to be present.

The Stock Breeder, of course, will want to be here to see the splendid exhibition of horses, cattle, sheep, swine, &c.

The farmer who does not feel so deep an interest in stock, will want to see all the improved implements, machines, &c., to know which will aid him most in his labors.

The Fruit Grower will want to be present, to see the fine apples, peaches, pears, grapes, &c.

The Florist will see a splendid exhibition in the floral department of all the rarest flowers.

The Mechanic must be present to see the enormous exhibition in this department.

The Mineralogist, the Geologist, the Artist must be present to see the splendid specimens in their line.

Of course the ladies must be at the Fair, to see all these things and many more.

So let one, let all come to the Great Fair on the 24th inst.

**FAIR AT BELLEVILLE, ILL.**—This fair will be held at the above place on the 5th, 6th and 7th of September. The Association have beautiful grounds, with appropriate and commodious buildings; the officers understand thoroughly their duties, and are polite and attentive; and the Exhibition generally in all its departments is highly creditable. We hope to see one of the finest exhibitions of this society this month that we have yet witnessed, and hope that the citizens of St. Clair and adjoining counties will do all they can to aid it.

**COTSWOLD SHEEP.**—A subscriber inquires whether we can inform him where he can procure a pure Cotswold Buck in Western Missouri. We believe that G. Mason Brown, of Arrow Rock, Saline Co. Mo. keeps Cotswold Sheep for sale. He is a careful breeder and keeps the pure Cotswold. He has taken a number of premiums in his and adjoining counties.

**COLORED PLATES OF FRUITS AND FLOWERS.**—We are indebted to Ensign & Ford, of Toledo, Ohio, whose advertisement will be found in this No. of the "Farmer," for a book containing a large number of plates of Fruits, Flowers, Evergreens, &c. painted in the very best style of the art. They are ready to fill all orders in this line.

Mr. D. M. Dewey, of Rochester, N.Y. will also accept our thanks for a number of colored plates of fruits well executed. Either of these parties will promptly fill all orders.

**THE HYDROPULT.**—See the advertisement of this new invention. We have seen it and tried it. It is no humbug. Every family in city and country should have it.

**EXHIBITION OF THE MERAMEC HORTICULTURAL SOCIETY.**—This exhibition will be held at Allenton, on the 12th and 13th of September. All interested in the culture of fruits and flowers should attend.

**A VISIT FROM AGRICULTURAL EDITORS.**—We acknowledge a call at our cottage home, from Chas. A. Bragdon, Esq. Editor of the "Prairie Farmer," and Hon. M. L. Dunlap, Editor of the "Illinois Farmer." We were confined to our bed by indisposition, and could not entertain our brother Editors as we would have been glad to have done. They are both doing a noble work for the farmers of Illinois; and their respective journals merit and deserve the patronage of every farmer in the State, and we might very properly add, in the West.

**FALL MEETINGS OF THE MISSOURI FRUIT GROWERS' ASSOCIATION.**—The members of this Association are hereby notified that there will be a meeting of this Society at Hermann, on the 7th and 8th of September, for the Exhibition of Fruits and the Discussion of Pomological subjects. A large number of new fruits, comprising Grapes, Peaches, Apples, &c., will be exhibited and their merits tested.

The Gasconade County Fair will be held at Hermann on the two days preceding this meeting, at which there will be a splendid exhibition of Fruits and Flowers; and the members of this Association have been politely invited by the officers of that Society to be present at the Fair.

There will also be a meeting of the Missouri Fruit Growers' Association in Pomological Hall, on the Fair Grounds of the St. Louis Agricultural and Mechanical Association, at its next Fair, commencing Sept. 24th, and continuing during the week.

All persons feeling an interest in Pomology, are cordially invited to attend these meetings.

NORMAN J. COLMAN, PRESIDENT.

DR. L. D. MORSE, Cor. Sec.

**CIRCULAR.**—The Eighth Annual Exhibition of the Illinois State Agricultural Society will present some new features worthy of notice:

1. We have the assurance that the Natural History Society of this State, will render that department much more attractive than it has heretofore been.

2. The Illinois State Horticultural Society has again joined with us; and we hope to have a very full representation from that oldest and heretofore most efficient of all similar Western Associations, the Cincinnati Horticultural Society.

3. Jacksonville is situated in the heart of one of the most wealthy, highly cultivated and fertile farming districts in the United States.

4. The Benevolent Institutions of the State are here located, and, with the Colleges and Seminaries, will well repay a visit.

5. The County of Morgan and those surrounding it, contain the residences of a very large proportion of the exhibitors of stock, who have been regular competitors at our exhibitions, and we may fairly expect much the finest display in that department yet had in the State.

6. Possessing, as they do, large experience, abundant means, energy, and proper pride, the citizens of Morgan county will make ample arrangements for the accommodation of visitors; and it is expected this Fair will be more largely attended, and more interesting in some of its departments, than any of those which have preceded it.

7. Camping grounds, comprising the most beautiful groves, abundantly supplied with water, adjoining the Fair Grounds and under the constant supervision of a police force, will be ready to receive those who choose to occupy them.

8. It is expected that several Steam Engines will be present to compete for the Society's Premium of \$1000.

9. The usual arrangements with Railroad Companies for transportation of freight and passengers, will be made.

Let every farmer who can possibly do so, come with his family to this Farmer's Festival.

JOHN P. REYNOLDS,

Cor. Sec. Ill. State Agricultural Society.

The following Patents have been issued to Western Inventors from the United States Patent Office. Reported for the "Valley Farmer," by BROADNAX & GRAY, Patent Attorneys and Solicitors, No. 44 Pine Street, St. Louis, Mo. and corner of Seventh and F Streets, Washington, D.C. whose terms, if so desired, are CONDITIONAL—no patent, no pay. Send for one of their circulars of instructions.

Davis J. Cochran, Centreville, Ind.—Improvement in Farming Compound.

Eleazar Coffin, Indianapolis, Ind.—Improved Morticing Machine.

C. J. Fisher, Wacokon, Iowa.—Improvement in Horse Collars.

Thos. S. Heptinstall, Mendota, Ill.—Improvement in Gang Plows.

J. S. Hicky, Pike, Ill.—Improvement in Grain Binders.

Hermann Kaller, Perry, Ill.—Improvement in Seeding Machines.

Gilbert S. Manning, Springfield, Ill.—Improvement in Excavating Machines.

P. T. Mayne, Keosauque, Iowa.—Improvement in Excavating and Grading Machines.

Worden P. Penn, Belleville, Ill.—Improvement in Seeding Machines (3 Patents of utility.)

C. W. Stafford, Burlington, Iowa.—Improvement in Mole Plows.

Leter Butler, Kenosha, Wis.—Assignor to himself and C. B. Ford, of same place—Improvement in R. R. Gates.

Lorenzo D. Lane, Freeport, Ill.—Improvement in Governor Attachment to Grain Separators.

#### REISSUES.

Ephraim Ball, Canton, Ohio.—Improvements in Mowing Machines (7 Patents).

#### ADDITIONAL IMPROVEMENTS.

Joseph Tiberi, St. Louis, Mo.—Improvement in Open Grates. This Grate is Fuel Saving, Dust Catching, and adjustable.

Frederick Yeiser, Indianapolis, Ind.—Improvement in Instruments for taking Altitudes of the Sun.

**CUTTING FEED FOR STOCK.**—In many places the dry weather has made a scarcity of fodder for stock.—The high price of hay in all the river markets, will always justify the cutting of feed; besides, it keeps the stock in much better condition. By actual experiment on a large scale, it has been demonstrated that there is an actual saving of a dollar a day on every twenty head of horses or mules, by cutting the feed.

A friend of ours in whom we can place implicit confidence, has been using one of S. P. Smith's Feed Cutters, purchased of Easterly & Brown, of this city, and we believe that there is none that equals it in simplicity, durability or efficiency. It fully answers the recommendations, and when the amount and great variety of work which it performs is considered, we think it cheap at the price for which it is sold.—[Mo. Democrat.

See advertisement in another column, and the following letter from practical stock-feeders:

Mammoth Stable, 493 Broadway, }  
St. Louis, Aug. 2, 1860. }

Messrs. Easterly & Brown, 77 Locust St.

Gentlemen: We take pleasure in giving you a statement of the work performed by a negro boy of ours (of medium size, 15 years old,) with one of S. P. Smith's Patent Straw Cutters, which we purchased of you.—The boy was not urged to extra exertion, and the knife had not been ground for four weeks, although cutting a large quantity of feed every day. He cut a liberal feed for 174 horses and mules in three hours.

You are at liberty to refer persons here to learn the working of the machine.

Respectfully yours,

SMITH & PEAY.